

THE WEALTH AND WELFARE
OF THE PUNJAB

THE
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OF THE
PUNJAB

BY

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H. CALVERT

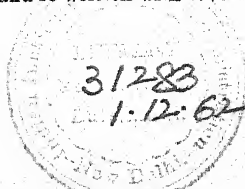
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SECOND EDITION

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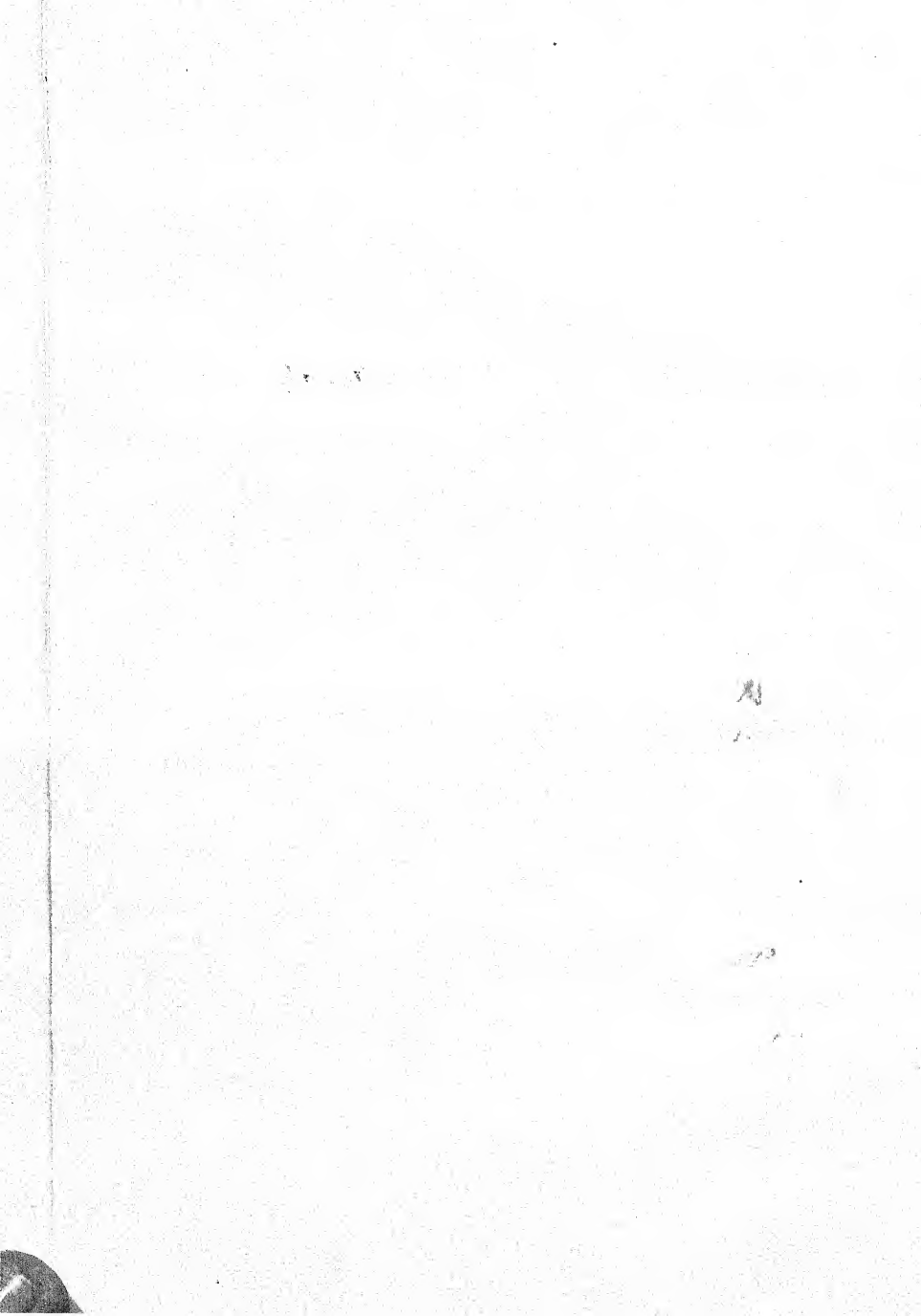


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PREFACE TO SECOND EDITION.

The first edition of this book was exhausted some years ago and while still in service I was not able to prepare a second. But careful and full notes were steadily kept and have been used to bring this edition up to date. Throughout I have revised the text and re-written the larger part of it, but the general scope of the book remains unchanged. I have of set purpose retained matter that related to the false arguments of a past decade because false arguments never die and seldom fade away. They will recur again and I hope this book will be found useful in refutation.

The book makes no claim to being a complete survey of economic conditions in the Punjab; I have said little about the great schemes of irrigation or about the progress of co-operation because each of these would require a volume to itself, but I have tried to throw light on some of the problems of the province in the hope that readers may be ready to make a close study of those important questions which will shortly come up for decision. The position of the Punjab is becoming critical. Its peculiar geographical situation renders its overseas trade unusually vulnerable to attack from the ignorance or selfishness of people in other provinces, especially Bombay, while its internal trade is practically confined to the East. Few people in the province seem to appreciate the danger to which it is being exposed and the need for most careful watch over its reactions to new policies. Whether Punjab trade will survive the continued imposition of new obstacles and new burdens is a matter that calls for serious consideration. At present the Punjab is being sacrificed to the interests of a small coterie of ardent but ignorant protectionists.

From about 1916 onwards a few friends of the province have devoted themselves to the study of its economic features, sometimes individually, sometimes as members of the Board of Economic Inquiry; and considerable progress has been made in the collection and publication of information. Much remains to be done but a large field of inquiry has been closed by that extraordinary example of political and economic ineptitude the abandonment in the interests of false economy of the statistics relating to rail-borne trade; that any government should deliberately blind itself in this manner would have been unbelievable but for the accomplished fact. In no other area of similar size in the world with any claim to civilised administration are governments kept

in such ignorance of the trend of trade as in the Indian provinces. The Punjab does not know in any detail where its exports go to nor whence come its imports. It is being reduced to a position in which it will be forced to fight and fight desperately to retain its trade as the alternative to a decline back to the old poverty ; but it will have to fight in the dark.

As explained in the preface to the first edition I have reproduced one chapter from the defunct Bengal Economic Journal and another from the Indian Journal of Economics. I make no apology for using again in the first chapter the same material as I used for the opening chapter to the Report of the Royal Commission on Agriculture. I have collected a mass of material on economic conditions during past periods of distress but I can only regret that I have been able to find room for so little here ; few, either non-official or official, read the old reports and so much misunderstanding is allowed to remain unchallenged.

In the same preface I acknowledged the great help I had received from Mr. (now Sir) H. W. Emerson, Prof. Hervey and Mr. W. Roberts, C.I.E. I regret that circumstances have not permitted this edition to be scrutinised by them and its value must for this reason be less than it might have been. In preparing fresh matter I have received valuable assistance from Mr. Lajpat Rai Dawar, M.A., Investigator under the Board of Economic Inquiry and Mr. C. P. Fazal, M.A., Assistant Secretary. Finally I must thank the officials in charge of the library and records of the India Office, London, for their invariable courtesy.

28th December 1935.

H. CALVERT.

INTRODUCTION

Every year, the Government of the Punjab publishes, in a paragraph of the Annual Report on its Administration, a note on the literary output of the province. From year to year it shows that while religion, politics, poetry, and the adventures in love of popular heroes are dealt with in generous manner, there is an almost, if not absolutely, complete neglect of books dealing with the economic problems that beset the people of this great land of the Five Rivers. One single body, the Board of Economic Inquiry, conducts more research and publishes more results than the rest of the province. A good library will place at the disposal of the student information concerning all the various countries that compose the world in which we live ; it is not really a very large world ; but people in general know very little about it. In every country, agriculture is of paramount importance ; in every country there are widespread complaints that if only the knowledge available were utilised to the full, the land would produce much more wealth than it does. Countries differ in their stage of advance along the road of progress. All were sorely stricken with poverty in the past ; most are still in the same old rut ; a few have advanced somewhat along the lines indicated by scientific discoveries and have achieved a measure of prosperity, which, modest enough in the eyes of their inhabitants, arouses feelings of envy amongst those who might travel the same road, were local circumstances favourable to such a course. The basic fact is that a single man, trying to fight the battle of life unaided by capital, intelligent direction, enterprise and scientific knowledge, can with difficulty produce enough to maintain himself and, perhaps, a wife and children. It is this impossible puzzle with which the people of this province have been struggling. After all, the producers of new wealth are the cultivators of the soil ; only a small proportion are engaged upon other forms of productive employment. The production of food is the most important, the elemental, the absolutely essential need of life. Yet cultivators are apt to be regarded as ignorant and of comparatively low status. Educated men not only know little about the work, they regard it as beneath their dignity. The number of graduates in this province occupied in administering to this one absolutely necessary want of mankind could probably be counted on the fingers of one hand. The occupational caste system obtrudes and holds its uneconomic sway over the land. Food production involves manual labour ; manual labour is distasteful to many amongst the educated, and so agriculture has not hitherto been popular amongst the educated as a means of livelihood. The same men who

write to the papers about the poverty of the people will at the same time advocate measures calculated to keep the producers in poverty and bondage, and will steadfastly ignore the many opportunities of public service open to any with the spirit of real selfless devotion to the good of their fellows. They themselves conform to the very ordinary laws of human industry ; they will do what is advantageous ; they will respond to the stimulus of gain, if the prize be large enough ; but they refuse to admit that the cultivator of the soil is a man of the same type as themselves, actuated by the same desires and ambitions, and subject to the same influences in the ordering of his daily life.

Poverty is, perhaps, the most universal feature in the whole world. Many peoples are still sunk deep in its mire ; a few are struggling successfully to escape from its strangling bonds ; some are well advanced along the road to freedom, but nowhere is there any country, or any people, so far advanced as to be free from the ever-haunting fear of starvation in time of stress. Perhaps, on no single subject is there more misapprehension prevalent in India, than upon this one of poverty. There appears to be a widely-held belief that in England or elsewhere there is no poverty and there are no poor ; that every one has enough for his needs and that, accordingly, India is somehow unfortunately situated and an exception to the general rule of prevailing prosperity to be found outside its borders. Yet for many years now England has been suffering from a famine of employment on a scale unknown in India. Millions of men, women and children would have starved but for an extensive system of relief. In no recorded famine in India has there been so much acute distress extending over so long a period of time. Curiously enough, Japan, perhaps the most hopelessly poverty-stricken country in the world, is regarded as the shining example of prosperity. Were Japan anywhere else but in Asia, it would be possible to bring some understanding of its special difficulties home to the people of the province. As it is, any attempt at comparison has to face the inevitable charge of partiality.

Of all the countries of the world, England possesses the most complete record in original documents of its history. The details available are a veritable treasure-house to the seeker after truth. Nowhere else is there the material at hand for the history of economic development in the same generous measure. England was not always rich. Its people were by no means always prosperous ; they, too, have had to face famines and pestilence, and have mourned the loss of large numbers of their fellows ; they have not always had wise guidance in their economic progress, just as they have been far from enjoying continuous wisdom from their political leaders. But there is one fact about England that gives its history a peculiar value to other countries ; and that element is this : England is by nature not a rich country, but its people, sprung from a mixture of races, have, beyond doubt advanced far along the road that leads from poverty to wealth. The history of England provides guideposts and warnings to all desiring to place their country on the sure road to prosperity.

If it be assumed that there be a country, poor at this time, but actuated by a desire to step forward to better things, then there will be found in the economic history of England much material of value to those who happen to be at any time possessed of the power to decide upon measures designed to speed that country along the road to that better state which its people desire. Examine the steps which England trod, and from some among so many will be discovered those which lead to the goal. If there be a difficulty here for which a solution is sought, that same difficulty will be traceable in the history of England, and the method by which it was overcome will indicate the line that promises the best result in this country. This is due in part to the prolonged peace and security within the United Kingdom, and in part to the wealth of records available to the student and investigator. The former has permitted a steady unceasing advance towards better conditions; while the latter has provided the material for sound criticism. Whereas, in other countries, invasion and revolutions have removed the shackles of feudalism, and broken the customs of centuries; in England, the change has been slow but continuous. As no one can produce either invasion or revolution to order, the effects of these upheavals are less valuable as guides to deliberate progress than the long history of slow change.

In the sphere of agriculture, England has passed through stages which are still observable in other countries, and has got beyond many which those countries have yet to go through. When a particular custom is under discussion, it is of value to be able to point out the undeniable advantages which England has gained from its abandonment. For example, the vexed question as to whether tenancy or cultivating ownership is the better has to a large extent been settled by experience; it has been found that what is required is not proprietary rights, nor even fixity of tenure, but security against irresponsible eviction. Security of tenure is the element of ownership which is necessary to good husbandry. Mere ownership alone may do more harm than good. In the Punjab, it is probable that the existing system of holding the land in millions of small parcels may retard progress when once the idea of competitive tenancy has taken firm root. Tenancy-at-will is generally regarded as an evil; and, where it is coupled with a system of peasant proprietorship, it must always be a danger; but when the time comes in which the more educated and more skilled will compete for larger farms against the unskilled and uneducated hereditary cultivator, then the system of small owners may prevent progressive agriculture by imposing an obstacle to the acquisition of enough land to supply the really first class farmer with full scope for his skill.

The fact is that agricultural problems are no more easy of solution than are political, industrial and social difficulties. They call for the best brains which the province possesses, but until the best brains are devoted to their solution, so long must the Punjab remain backward and poor. At present, for want of clear thinking and logical exposition, there are many who hold at one and the same time opinions quite contradictory to each other. Some complain of the high cost

of living and advocate protection which will most certainly aggravate the evil; others argue that there is not sufficient food produced within the country, and yet advocate measures which will restrict production; others again while deploring the heavy pressure on the soil, urge the need for industrialising the country, as if a man taken away from agriculture to industries would affect that pressure or require less food; one who urges the need for industries ignores the inevitable effect of a great increase of population and its consequence, an increased demand for food from the soil; the same writer will deplore the present taxation and demand vast expenditure on projects which find favour in his eyes; one will condemn the size of the bureaucracy and urge an immense increase in the sphere of governmental activities; the elemental fact that the expenditure of Government must needs be influenced by its income is too often overlooked; the policy of Japan is held up to praise by those who would never agree either to the heavy taxation by which alone that policy can be financed, or to the bureaucratic interference and control through which it is carried into execution. The simple fact is that in the sphere of economics there is too much talking and writing and too little painstaking study. It is not sufficiently realised that economic laws are not the dogmatic decisions of a few professors, but are the concentrated descriptions of the world's experience. They cannot be ignored with impunity; experience is a hard taskmaster; and he who prefers to trust to his own ideas and to his own narrow personal history will inevitably fail when pitted against those who learn the wide lessons which the world has to teach. The knowledge already collected is sufficient to guide a backward country along the right road to prosperity. America is learning from the close study of others; Spain has been stagnating because she refused to benefit from that same study. In India and in South Europe, religious and constitutional questions absorb so much attention that the economic aspect is apt to be ignored. So much is this the case that it sometimes seems doubtful whether after all there is or is not a general desire to see the country progress along the road to material prosperity.

It has become a habit with some publicists in this country to confine their comparisons to England, with the natural result that India comes off second best; they ignore other States in which conditions more resemble those they know; for some reasons, England is not suitable as a standard; its land is for the most part cultivated by tenants under wealthy landlords; during the eighteenth century these landlords became the most zealous students of agriculture and the boldest experimentalists in the new methods of culture; with extraordinary zeal, activity and judgment, they made themselves acquainted with their own estates, and became the practical teachers to the small proprietors, the yeomanry and the tenant farmers. There is, says Thorold Rogers, hardly any service of a public kind which was greater than that which was done to English agriculture by many of the landowners of the eighteenth century.⁽¹⁾ There are big landowners in the Punjab, but amongst only a few of them

(1) *History of Agriculture and Prices*, Vol. V, Preface VII and XIII.

is there yet discernible anything approaching that same zeal or enthusiasm which brought such great advance in wealth to England. The honourable exceptions have shown and are showing what public-spirited landlords can do and are encouraging others to embark on the intelligent administration of their estates. The Punjab is, however, a land of small holders; and it is apt to be misleading to compare it with a land of tenant farmers. The continent of Europe provides more parallel conditions: France, Germany, Belgium, Rumania, etc., are essentially countries of peasant proprietors; and the history of their agricultural development is rich in material for comments upon the present state of this province. Fragmentation of holdings, which is such a serious evil here, is still a considerable obstacle to progress in other countries, whose governments have not yet found a satisfactory method of eliminating it. French agriculture remained stagnant for five hundred years, a part of which period includes the years when the art in England was progressing by leaps and bounds. In Germany, it is common to date the agricultural reforms of the nineteenth century from the publication, in 1798, of Albrecht Thaer's "Introduction to the knowledge of English Agriculture." (1)

Besides the system of land tenure and the great services rendered by the English landowners, there is another factor in British history which makes the United Kingdom unsuitable as a basis for comparison with India, and that is the continuous struggle to practise thrift and to save. It is this which vitiates the popular ideas as to the average incomes of the peoples in the two countries; the average here is almost entirely based upon the bare earnings of the present generation unaided by any considerable inheritance in the form of capital productively invested by their ancestors; the average in the United Kingdom is higher largely owing to the productive investments of former generations and the vast knowledge and experience they had handed down. Here, the simple needs of the majority can be satisfied with the minimum of effort. On the great alluvial plains a mere scratching of the fertile soil and a handful of seed will set the forces of nature to work at the production of a crop. Nature appears to be so bountiful that man need do little; the land is the gift of nature and what nature provides, upon that man subsists. In England it is, far otherwise; the land itself was never so fertile; as it exists at present it is almost entirely the work of man; the average value of agricultural land is very little if any more than the value of the improvements carried out by its successive owners. It has, for instance, been estimated that the roads, fences, gates, drains, etc., considered necessary for modern farming have cost £12 an acre, the buildings and farm-houses have cost another £9 making £21 out of the £25 which was the average value per acre before the war. Of the £4 left, most if not all is due to the fertility of the top nine inches which is practically the result of human labour. (2) Compare this with conditions as they exist in the Punjab, and it will be understood to what extent the present generation of Englishmen are indebted to

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- (1) Chapman: *Economic Development of France and Germany*.
 (2) Curtler: *The Enclosure and Redistribution of our Land*. p. 167-8.

their ancestors. It was prolonged grinding poverty, generations of hardships, recurring years of bad harvests and constant fear of starvation that forced them to adopt thrift as the one means of escaping death. Centuries of war against adverse climatic conditions have produced that dogged determination and endurance which form now their greatest asset. The present generation, both here and in England, is what its predecessors have made it; if there be discontent with present possessions or present wealth, it should be directed against those who have left so small an inheritance. A generation inherits what its forefathers have acquired for it; for nowhere, except in the most primæval society, is there any people dependent upon its own efforts, unaided by the accumulation of wealth or experience of those who have gone before. Where that accumulation is vast, that people is indeed fortunate; where it is small, that people find poverty its lot. In India, it would seem that economic advancement has seldom if ever been the ideal of the great leaders who have from time to time adorned the pages of its history. Hindu society is still based not upon economic lines but upon those of religion. Manual labour is still associated with loss of dignity, while agriculture is placed, in the estimation of many, below other callings as a genteel means of earning a living. In other countries, society is based on production; wealth is a power that enables its owner to force himself to the front, while poverty entails the loss of social position. Whether this is for the best is outside the scope of the present discussion; what is important to remember is that concentration on the production of wealth leads to its accumulation while neglect of production serves to retard this process. The Englishman is thus a product of economic forces, the Indian more one of religious thought. The past is responsible for the present, just as the harvest reflects the husbandman; and the future will faithfully represent the struggle of the present generation to produce a better world for its children, just as it will yield a return to the capital about to be invested in new canal projects. If this province is to make progress, there must be more of the essentials to progress; there must be a better understanding of what progress means, and what changes it entails; there must be a greater readiness to accept those changes and to encourage those essentials. There must be more concentration upon the solid things of life, upon those permanent elements that tend to ultimate good, and upon those factors without which no country and no nation can progress far along the path to prosperity. Sentiment is apt to lead astray unless strictly controlled by a full appreciation of the basic facts of life. Guided into channels of productive utility, it will serve this province well. Throughout this book, it is assumed that there is a general desire for material prosperity. It is nowhere intended to combat the ideal of a simple life, but the appeal is directed to those who would like to see the people attain a higher standard of living.

In attempting to indicate the sources of weakness and strength of this province, it seems desirable at the earliest opportunity to explain the limitations under which any enthusiastic constructor must work.

For the statesmen of the future must understand the sphere open to his activities as well as that wider one where he cannot enter. In the first place, wherever the annual rainfall is sufficient to enable a crop to come to maturity without artificial aid, there the available land has already been brought under the plough or has been devoted to village forests or catchment areas for ponds; elsewhere the Irrigation Department has already brought within its sphere most of the land suitable for cultivation. Private canals and wells have done the same for other areas until there remains comparatively little good soil available for further exploitation. The possibilities for the expansion of irrigation from the great rivers are now limited though the tube-well still awaits utilisation on a large scale. Within the present cultivated area of the province, the size of holdings is already determined, partly by historical development and partly by State action. Short of a revolutionary change the distribution of the land amongst the people must be accepted as outside future political activity. But although the unit of production is already fixed, the use to which the land within the unit shall be put is flexible, and perhaps no problem deserves closer attention or more persistent study than to discover what use of the holdings would yield the highest return to the cultivator and the greatest good to the State.

Under the new Constitution, the people of the Punjab will have to recognise that almost the whole provision of the means of distribution of their produce will lie outside their hands. The railways, post, telegraph and sea-ports and the means of international trade will not fall within the orbit of the future self-governing province.

As a result of this, the great work of marketing will be largely beyond the control of the new government. The prices gained by Punjab produce are already decided by world factors, and the producers and middlemen can have little influence over them.

Thus the area available for cultivation, the distribution of that area amongst the people the distribution and marketing of produce and the determination of price are matters over which the government of the future will have little control. The costs of production, the elimination of waste, the removal of inefficiency, the improvement of quality, grading, and so on will be local affairs, as also will be the selection of the use to which the land will be devoted. In so far as the produce of the fields is consumed within the village the limitation mentioned counts for little, and there is a clear field for the attempts to improve the diet and health of the people; it is in regard to that portion of the produce which enters into trade and commerce that outside factors will exercise dominating influence.

In the pages that follow, the attempt has been made to state some at least of the facts of the province with some description of their interaction on each other and on external trade. The views are on the whole those of orthodox economists, but a real endeavour has been made to express views in terms of Punjab facts, and to challenge views with which the writer is in conflict by reference to Punjab conditions. There is, for instance, a new madness come over the world, styled economic nationalism, the main idea of which

is that the self-sufficiency of the cultivators' holdings, which has held them in poverty so long, should be introduced to the boundaries of a country, so that there should be neither buying nor selling, import nor export, between one country and another. Each should aim at a miserable self-sufficiency. The late Mr. Barry, when Settlement Officer of Attock district, found that that tract was essentially self-supporting in its agriculture, that it neither imported nor exported foodstuffs, but consumed what it produced and produced enough for its own consumption. It is generally regarded as a poor and backward district and most of its people would welcome the opportunity to expand their activities to produce more, to sell more, to make more profit and to be able to buy more. It will hardly be argued that an increase of its self-sufficiency into the sphere of industry, education, and so on would make for better living. Self-sufficiency would kill any Punjab colony. It is useful to test theories by practical examples for though the analogy be imperfect it helps to check the accuracy of argument.

The whole of this book has been written from the point of view of a sincere well-wisher of the Punjab, who desires to see its peoples win for themselves the wealth, the power and the moral status which he feels to be within their reach.

CHAPTER I

HISTORICAL RETROSPECT

The Government of India as supreme landlord—Revenue, Agriculture and Commerce—Revenue and Agriculture—Politics and the Tariff—the division of responsibility—rural India and the monsoon—simplicity of needs—the Punjab village—the market for produce—self-sufficing agriculture—causes of the small holding—famines—and production—stagnation of production—effect of internal peace—of the record of rights in land—resisting power—increase of capital—communications—irrigation—commerce and agriculture—the end to stagnation.

The material available for the study of the history of the Punjab in its economic aspect is scanty, and in order to understand the changes of the last eighty or hundred years, it becomes necessary to borrow from the recorded experience of other provinces in the reasonable assurance that they throw a fairly accurate light on what happened here. Mr. Moreland has placed northern India under a great debt by his published researches into conditions of rural life under the Moghal dynasty and he has given a broad impression of the position on the land up to the time when the British records begin. The writer of this book has endeavoured to ransack all the sources of information he could hear of in the attempt to understand the gradual evolution of the Punjab from a desert, fringed by the submontane tract of high rainfall and pierced by the cultivated beds of the great rivers, to the position of being the most flourishing and most progressive province in India. There is still much detail to be filled in, but it seems, at this juncture in the history of India, not only desirable but necessary to try to explain to the people the causes which brought about their increasing prosperity, in order that they may be able to use their new political power to defend themselves against policies, persistently pressed, which can only end in the destruction of their security and of some of the most important sources of their wealth. This is not in any sense a book on politics; it is not concerned with the foreshadowed political changes; but the author has for thirty-five years received unlimited kindness, friendship and support from the people of the province and he feels that it would be a poor return to them if he failed to bring to their notice what he believes to be the truth about their economic position. The original sources of revolutionary changes may attract little attention at their inception, and, in the flood of

destruction that follows may escape notice altogether. The threat of economic decline that hangs over the Punjab has its source in changes that seemed perfectly harmless. Up to the early years of the present century, the Government of India was the recipient and the distributor of all its main revenues; provinces prepared estimates of their requirements just as departments do now, and these were sent to the central government for approval and the provision of funds. The chief source of those funds was the revenue derived from the land, and the watch over the assessment and collection of that revenue was entrusted to a special "Revenue Department" of the Government of India; that Government regarded itself as the supreme landlord of the country and the guardian of its people, and announced itself in these terms and implemented its belief in its responsibility in unremitting devotion to the cause of the class which toiled on its fields and provided the largest single source of its income. About 1870, the Government of India began to take steps to exercise more control over the actions of local governments in relation to all matters concerning the improvement of agriculture, and in 1871 the Department of Revenue became the Department of Revenue, Agriculture and Commerce. Financial stringency later led to modification, but the Famine Commission of 1880 pressed for the restoration of a Department of Agriculture, and this was again constituted in conjunction with that of Revenue. Some day, it is to be hoped that a competent author will be found to write of the history of that department, of its tireless efforts for the improvement of the lot of the cultivators and of its masterly compilation of facts and summaries of rural problems. For purely temporary administrative reasons, some of its publications were labelled "confidential," and the label has stuck long after the reason has been exhausted. For example, one of these dealt with the problems arising from the increasing number of alienations of ancestral land by agriculturists in favour of moneylenders throughout the whole of India; as legislation was contemplated the brochure was marked "confidential" until the Bill was prepared. Actually several legislative measures resulted, but for thirty years opponents of the Punjab Alienation of Land Act have given utterance to statements which they would never have made had this excellent publication been available to them.

The combination of revenue, agriculture and commerce was of great significance; it represented a great truth which now is apt to be forgotten;—that the revenue and the agriculture and the commerce of India are to a very large extent but different aspects of the same fact: that the main source of new wealth in India is her agriculture; that it is agriculture which yields directly or indirectly the chief items of revenue and that it is commerce

which through its great services has enabled agricultural produce to provide the revenue and the wealth. The interests of agriculture and commerce and of the governments which depend for their funds upon their successful operations are the same ; it is impossible to injure one without injuring the other two, or to develop either agriculture or commerce without also increasing the financial strength of Government. The Famine Commission of 1880 stated the greatest fact of India when they wrote : " it is to the improvement of the internal communications and the removal of all obstacles to the free course of trade, accompanied by the extension of irrigation in suitable localities and an improved agriculture that we must look for obtaining security in future against disastrous failures of the food supply." It was round about this period that the peak of economic wisdom seems to have been attained in the Government of India ; the next forty years witnessed the practical application of the great truth and by 1920 India had reached the zenith of her career as a country wisely governed, of steadily increasing prosperity and of unending solicitude for the people who produced and distributed her wealth. In the meantime changes occurred which were never designed to lead up to the results they have produced ; commerce was separated from agriculture in the secretariat to an extent which is impossible in the field ; the revenue from the land was allocated to the provinces and the Central Government divorced itself to a very large degree of its responsibility for the encouragement of the improvement of agriculture. At that time, India was a free trade country with either no import duties or a tariff so light that trade was not impeded ; with the demand for funds caused by the Great War, import duties were resorted to, so that customs which provided only about ten crores before the war (which sank to 881 lakhs in 1915-16) were raised to yield over 22 crores by 1919-20. Up to this time, agriculture and commerce, (1) its inseparable handmaid, were still the chief pre-occupation of the Central Government ; but with the Reforms of 1920 power passed, to an extent not at the time fully realised, into the hands of an urban element drawn not from the commercial class but from professional men and a few manufacturers who initiated a campaign for a policy of protection in general. The experiment in provincial self-government was considered to require as a condition of success the provision of funds to enable the new ministers to carry out their schemes, and so fresh sources of taxation had to be sought. Land revenue was unsuitable owing to the long periods of settlements, income-tax proved to be incapable of yielding the funds required, it reached its highest peak in 1919-20 and has not responded to all the efforts of the Central Government to secure greater revenue. Salt showed itself very sensitive to an increase

(1) Including, of course, means of distribution.

of taxation and refused to give a higher return. Excise was mainly the stand-by of the provinces but it had already been based upon the policy of the maximum of revenue with the minimum of consumption and proved of little comfort when further funds were needed to satisfy the provinces. There remained to the central government one source as yet not exhausted and that was the taxation of the poor masses through customs and from the new urban element in politics there was forthcoming support for the imposition of higher and yet higher burdens on the trade of the country. Import duties which yielded 22½ crores in 1919-20 have now been manipulated to yield over 51 crores, and, as the greater part of the international trade of India consists of the export of agricultural produce and the import of the goods in payment for that produce, it will be readily understood how great is the burden imposed on agriculture and commerce. No longer is the central government the ultimate landlord and the protector of the cultivator and his distributor: it is, and has since 1920 been, the tool of a small but impatient urban element which seeks sources of profitable investment in industries, mainly not yet in existence, and which cares little about the overwhelmingly important occupations of agriculture and commerce. From writings and speeches it would almost seem as though these people would welcome the destruction of the Suez canal and of all modern means of communications which brought to India commodities in payment for the produce of her fields. It is admitted that the tariffs are too high; it is obvious that India is not yet ready in equipment, facilities, resources and essential conditions for industrial expansion on such a grand scale as would justify the general protection afforded by the tariff wall, and it seems clear that a dangerous situation is being reached when her trade will decline under the heavy artificial obstacles imposed upon it.

In the ensuing pages, this problem will be studied from several angles, but before entering upon the discussions of particular aspects it seems advisable to remind the reader of a little economic history, which is now too often neglected and sometimes forgotten. India, the India of 500,000 villages, is not different in the fundamental features of life from other predominantly rural countries; men living in simple and natural conditions with small wants and no urge to change tend to be alike the world over. Many descriptions of other similarly situated countries would apply word for word to large tracts in this great sub-continent. But there is one great dominating and almost unique natural feature that makes its annual impress on the whole country and moulds the activities of the people and dictates the directions their energies shall take to an extent unknown elsewhere and

that is the monsoon. Apart from the extreme north-west area where it is too feeble to influence man's life, the whole country is dependent on the rainfall it brings, and the agricultural operations of the majority of the people and the subsequent activity of the great classes engaged in village industries, commerce and trade are almost automatically defined by this one natural phenomenon. It is not only the finances of the Government of India, as one Finance Member claimed, which are based upon a gamble in the monsoon, but the whole annual outlook of the great majority of its people. To the people of the Punjab the repercussions of this one single fact are of special importance, for to a larger extent than in any other province they have been brought by their government into a position whereby a very large area, roundabout 12 million acres, has been placed outside the reach of a short monsoon by an irrigation system of unparalleled magnitude. There is a huge area in the Punjab to the people of which a failure of the monsoon may mean not disaster but wealth. As the population increases in areas without a corresponding increase in food production, the advantage accruing to cultivators of irrigated lands will become greater so that, while largely if not entirely independent of the monsoon for the maturing of their crops, they will still look to it with interest as the arbiter of their prices.

There is one other general and supremely important characteristic of the whole country and that is that nature makes small demand for housing or clothing or for the provision of expensive means of artificial heat, and linked with these is yet another general feature: the simplicity of the diet of the people. The economic results of these are imperfectly understood, but some attempt to explain them will be made later.

The vast majority of the people, about ninety per cent., live in small villages as they seem to have done from time immemorial; the mud houses are clustered close together in a more or less compact area, usually in the midst of the fields which provide the means of occupation and livelihood. There are no farms and there is no farming in the English sense; there are no farmsteads with special fields attached thereto; indeed, there is no obvious link between the houses and the fields of the various cultivators; their homes are in the village and their fields are scattered all over the area of land belonging to its proprietors, each man's holding being usually fragmented into tiny plots of one-eighth to one-quarter of an acre distributed amidst similar fields of others. (The village declares to all the chief religion of its inhabitants by signs unmistakable—a burning ground or cemetery, a temple by the pond or a mosque with its minarets within the village, or in the central Punjab a Sikh dharamsala with its characteristic flags.

8 Even the crops afford indication of religious belief, for the Sikh
 9 will grow no tobacco, the Hindu no root crops, such as onions,
 and so on. The holdings are everywhere small; throughout the
 south and east, the average cultivator has not above five acres;
 elsewhere there may be more larger holdings but half will not
 exceed this area. Within the village, and there are 35,000 in the
 province, there will usually be found a hundred proprietors,
 owning singly or in common, about 1,100 acres, of which some 770
 will be cultivated. There will be some 140 tenants' holdings but
 of these, many will be in the hands of the smaller owners who have
 taken from the owners of areas larger than they care to cultivate
 themselves such lands as they could secure on rent. The figures
 at different Settlements suggest that in general the increase of
 population has been met by an extension of the cultivated area,
 or where this has proved impracticable, by emigration to the
 colonies or abroad. In each village will be found a group of
 10 artisans dependent upon and yet supporting the cultivators,
 supplying their needs for implements, woodwork, harness, pots,
 clothes, drinking water and primitive sanitation; in another group
 fall the providers of human needs, both material such as the
 11 shopkeepers and money-lenders, and spiritual such as the priest
 or mullah or granthi.

Of all these, it may be said with some confidence that they
 are all economically mutually dependent; to all a bounteous
 harvest means some taste of prosperity, a bad season a tightening
 of the belt. They live together within the village site, they
 flourish together and when times are bad they suffer together.
 If a careful survey be made over the 35,000 villages it will be
 found that on the whole they live in peace together.

12 Outside the villages, large towns are few, great cities rare,
 and the influence of such as there are is still limited to a
 comparatively small radius. The great majority of the villages
 are still untouched by metalled road or railway; post offices are
 many miles apart and telegraph offices still more scattered. In
 countries with large holdings (1) the dominating market is the
 town; but, where holdings are tiny and where villages have each
 their own industries supplying local needs, the market for the
 greater part of the produce is within the village itself. It is not
 possible to give accurate figures, but of food-grains about 30 or
 13 more per cent. is consumed by the family of the producer, and
 another 30 to 40 per cent. by the landlords, the industrial classes,
 the shopkeepers and other residents of the village. The proportion
 that enters into trade outside the village is probably from 20 to
 30 per cent. In the colonies where holdings are larger, as much

(1) Such as England where two-thirds of the cultivated area is in farms of
 over 100 acres each.

as 40 to 50 per cent. may enter trade outside the village, but conditions there are exceptional.

14 It is the concentration of population on the land due largely to the smallness of the holdings that explains the persistence of the self-sufficing type of agriculture. The simple fact that the cultivators are themselves more than half the total, and that with their artisan and labour dependants they total roundabout eighty per cent. of the people explains why almost every one of them concentrates on the production of food and other necessities for himself and family and the families who receive payment for work in kind.

The urban population, being only 10 per cent. does not provide as great a market for food as in other countries, while the surplus after meeting local requirements is but a small fraction of the whole produce, so village self-sufficiency is likely to remain as the general ideal.(1) It may be fairly assumed that the same type has been in existence for centuries past.

In a primitive rural society, the desire to accumulate money is not a characteristic; when communications are lacking and trade and commerce are in their infancy, it is hardly possible for a cultivator class to aim at gain through the production of food-grains and other commodities in excess of its own requirements; the immediate object is the satisfaction of its own demand for the simple necessities of life; the wants of distant consumers exert no influence until they have been brought to the village through organised trade, commerce and communications; even to-day, as Mr. Darling has pointed out(2), in villages away from towns and the main routes, cash plays little part and is not often accumulated as such. Between the distant consumer and the producer there must be a chain of intermediaries before the demand from the one will stimulate the other to greater activity. It is doubtful if the lure of cash alone would influence the attitude of the cultivator to his fields; the demand of the distant consumer has to take the form of payment in attractive wares before the stimulus to increased production is born. The fact that in old settled districts, cultivation has increased in the last eighty years is sufficient proof that such an increase was practicable long before it took place, and the delay may be ascribed to the lack in the past of the attractive lure that now is displayed in village shops. There was no effective reward offered for the extra exertion required if crops beyond the local demand were to be raised, and so the

(1) How extraordinarily deep seated in all of us is this desire for self-sufficiency is illustrated by the almost universal custom in England for every house in the country to have a vegetable plot, and usually some fruit and quite commonly some poultry.

(2) *Wisdom and Waste in the Punjab Village.*

larger crop was not grown; and, as where almost everyone is a cultivator there is small scope for sale, the idea of growing for sale is not effective. Neither in India in general nor in the Punjab in particular is there any history of widespread large-scale farming with the object of producing for sale, and when, with a population less dense on the land than now and with ample scope for the expansion of cultivation, there was opportunity for the production of crops in excess of immediate needs, this was not seized because there was no incentive, no tangible reward in sight, no wants to satisfy and, for lack of a demand for the excess crop, no chance to convert it into ornament. (With nature generous, with wants simple and few, with no certainty that a surplus could be exchanged for something different, the irksome labour involved in ploughing and reaping was limited to what was necessary for the home till next harvest.)

In such conditions, holdings must be small, these being sufficient to meet the requirements of the family and the tax-gatherer; and holdings seem to be small all over the East now and to have been small for ages past; there does not seem to be any evidence that at any time the holdings in the Punjab were much larger than they are to-day (larger that is to say in the sense of fifty acres and over). In the Report on the great Orissa famine of 1866, it is remarked that in India no large farmer has held his own against the small farmer—the man who cultivates his plot with the assistance of his family and an occasional hired labourer. So ingrained has the custom of small holdings become that even to-day with a demand for agricultural produce of many kinds and a ready sale in numerous markets, even where owners possess large holdings they rent it to petty cultivators. Large scale farming is open to many but few practise it. From the above it should be easy to understand why in the past large tracts lay uncultivated, forests covered great areas, and the renters or “farmers” of the revenue sought far and wide for people to till the vacant spaces. Where disastrous famine had spread over the land, robbing it of a large proportion of the population, the survivors did not extend their cultivation over the old area and so increase their production and build up a store against the next calamity, but left it largely untilld meeting their simple requirements from a portion only of the land available. Years after the terrible famine of 1770, it was recorded that “the most moderate calculation stated the uncultivated portion of the province (of Bengal) at one-third, while other authorities asserted that at least one-half, if not two-thirds, of Bengal lay waste.”

In times past, with no large towns, no industrial population on the modern scale, and limited means of export overseas, the production of food-grains must have been confined to the demand

(for local consumption. When favourable seasons yielded a surplus, this was stored, and such stores were common if not general) for the surplus could not be sold, and storage was the only means of disposal save destruction. Destruction was not uncommon, or the unwanted crop would be left uncut and later ploughed in; for stores were never extensive; in the great majority of years the harvests sufficed for the needs of the people, and storage in excess of a season's requirements would be unnecessary. There are obvious limits to the holding of large quantities of grain, even to-day, and there was little chance to convert it into cash or treasure. The even cycle of harvest after harvest, the crop of one being consumed while the other was already ripening in the field, would tend to make large stores rare. And although this even cycle was occasionally broken by drought, and throughout the known history of India famine has always been a dreaded visitor, this was always local and never general; famines in India might be frequent but in any given area the turn of an individual to suffer came but once in fifty years on the average. The dreaded possibility was thus too distant to affect mass action in the way of making preparation in advance, and there does not seem ever to have been any effort by the people to ward off the effects before the calamity was upon them. With governments the case was different as famines wherever they occurred were disastrous to public revenues as well as to private lives; before the British came, it was the former aspect that appealed, and for long after an enlightened administration had come into the land there was not the information available to give warning of an impending calamity; there were no statistics of rainfall, of areas affected, of the population threatened or of the crops ruined such as now enable Government to take prompt and effective action. It was not till the famine of 1868 that the Punjab Government, for the first time, assumed responsibility for the saving of every life that was threatened and declared that its district officers would be held responsible for seeing that no preventible deaths should occur.

"Amid the wars, and distractions and financial difficulties that attended the building up of an empire," says the Famine Report of 1901, "the claims of famine relief attracted small attention." The administrator of the day may be guided by the recorded history of the past; what escapes record is apt to be lost to the future. In the case of famines, only such past experience could prove of value as was available in the form of records; where no records existed, it has not been unusual to assume that no famines occurred, and similarly the multiplication of records has been misunderstood to indicate an increase of famines. It was only when records became available over a series of years that famine was accepted as a necessarily recurring incident of life in India;

but, once it came to be regarded as an inevitable calamity, the need to anticipate it and to prepare for it in advance was admitted with the result that a severe drought is now no longer associated with heavy mortality from starvation. But such a stage could only be reached after long preparation.

"Before British rule," says the Famine Report of 1880, "agriculturists generally existed in a state of serf-like tutelage and dependence upon higher authorities. The cultivator had no rights to trade with, and little concern beyond raising and harvesting his crops. All beyond this was managed for him by the State farmer or revenue officer or the village headman; and the village banker, who made him advances also conducted his business in subservience to the local authorities." The general rule of life was that the harvests sufficed for the current needs. The immediate requirements for human life—food and warmth—were easily satisfied by soil and climate. There was little or no spur to increased effort, little need to look ahead, little scope for enterprise and little reward for labour in excess of the customary. Under such conditions, progress, as now measured, of necessity lagged; the accumulation of wealth was slow, and it is not easy to see what internal forces there were which would, unaided, have broken the circle. Bumper harvests merely caused a glut; they served to replenish the stores but went little further towards strengthening the community against the strain of calamity. A severe drought on the other hand caused immense economic loss. The former could not counterbalance the latter. The trading community of the time could not find markets to absorb the surplus of the one or to meet the deficiency of the other; its own development was the result of contemporary normal requirements, and neither the pressing demands of a year of famine nor the surplus of a bounteous harvest was sufficient to bring into being the higher organization of commerce and communications without which its special needs could not be met. There was needed a steadily recurring movement of commodities, a normal surplus over local consumption in one area and a normal demand for this surplus in another. Recurrent famines were not of themselves sufficient to bring about the production of a surplus or to sustain the machinery to dispose of that surplus or even to bring into being the means for their own remedy. They occurred at too long intervals in any one area to stimulate a development of trade and communications in that area sufficient to cope with such a crisis. For trade in food-grains and other goods, a steady volume for sale is essential. The market requires steady feeding, not gorging in a season of plenty and starving in one of drought. The position was thus practically stabilised: no organization for trade and commerce could grow up without the production of

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goods surplus to the local demand, and no individual, no village and no province would continue to produce such a surplus unless there were in existence the machinery of trade and commerce to ensure for it a reward commensurate with the labour expended.

Progress in agricultural production seemed to be waiting on the demand of a market which in India did not exist.

There were other factors tending to restrict agricultural progress. The cultivator could never be sure that he would be left in possession of the harvest he had sown; not only was internal peace apt to be disturbed but the demands of the State on the land were heavy to an extent which made its possession a liability rather than an asset. They were based upon the crop and not on the individual and increased on the latter as his cultivation increased. They were frequently arbitrary and variable with the needs of the time, the embarrassments of the sovereign or even the temperament and rapacity of the local authority. While cultivators were essential if revenue were to be raised, the interests of the revenue were apt to overshadow the claims of the cultivator, and instances were not wanting where authority in its greed miscalculated the essentials to its own fortune, and the cultivators deserted their homes in search of better conditions.

In circumstances such as these, with a people living always on the margin of subsistence, with such reserve only as was represented by the unconsumed surplus stored from the previous harvest, any violent interruption of the normal involved risk of calamity. Although in general drought has been the most frequent cause of famines, it was not the only one. Invading armies laying waste everything in their paths, storms and floods, swarms of rats and locusts, and sometimes the immigration of hordes of refugees fleeing from starving homes have each and all in their time brought distress amounting to famine. In the absence of organisation on economic lines, there was little resisting power; with family expenditure at a minimum reduction could bring no alleviation and there did not exist the machinery to afford relief.

There was neither the knowledge nor the experience nor the resources at the call of the State with which the modern administrator is armed. In judging of the past, nothing is more barren or more misleading than to appraise the acts or policies of those in power by the knowledge of the present or by the experience gained since their age. Those in authority could only act in the light of the information and the knowledge at their disposal, and the gradual progress of the people towards an economic position from which the threat of famine seems remote was inevitably long and slow.

The first measure that set the people on the road to better conditions was the establishment of internal peace and security.

So complete is the achievement that it is sometimes difficult to appreciate what it means, how recently it was accomplished and how frequent and devastating were the movements of hostile armies (1). The imminence of the danger is illustrated in the old jibe that Government waged war whenever there was money to pay for it. The records of the time bear ample testimony to the constant strain on the treasury and to the consequent inability of the administration to devote funds to internal development. It is hardly exaggerating to state that the strain continued in one direction or another until the close of the extensive frontier operations of 1897-98.

Close following upon the achievement of internal security came that exhaustive and elaborate inquiry into rights in land of which the record forms the basis of rural prosperity. It is long since the work was begun, and it is doubtful whether it will ever finish in the attainment of permanent perfection; the magnitude of the task of examining so enormous a country field by field is apt to be overlooked. The benefits to the people are almost immeasurable. Along with the detailed record of rights in the soil went the settlement of the Government demand either permanently or for such long periods as would relieve the revenue payer from the harassing anxiety of uncertainty. Further, it was found possible to distribute the demand more evenly over the land and to reduce the burden in terms of produce. Land began to acquire a value, and the security for credit thereby obtained served to mitigate the intensity of distress. The economic disorganization of a lasting character which had followed other calamities was avoided; the people were in secure possession of their land; their rights were on record and although migration still took place on a large scale, it was of a temporary character. The whole outlook of the rural masses was influenced by the fact that they were now in possession of rights which were rapidly becoming valuable, and in the possession of which they were secured by settlements for comparatively long periods.

Formerly the land was practically unsaleable; it was of less value than the crop it bore. In the earlier famines it does not appear that the land was sold; the furniture and the cattle were disposed of, ornaments were pledged, and when resources were exhausted the people deserted their villages and their fields and wandered in search of food. The land found no purchasers; it was of no use unless it bore a crop; it was a burden involving liability for revenue and not an object of desire which could be pledged for credit. But with rights defined and the State demand fixed, with protection against arbitrary ejection and a clear

(1) Although the last wanton invasion of India by a hostile army was as recent as 1919.

understanding of liabilities, the cultivator had some assurance that the fruits of his labours would not be lost to him. It was this improvement in his position which went so far to strengthen his resisting power against the strain of prolonged drought. The point is so important that some details may be added. It is apt to be forgotten that where security is lacking and internal commotion is rife, there is truth in the words of Falstaff that "You may buy land now as cheap as stinking mackerel."

The change to present-day prices of land in the Punjab is not in any great measure due to higher outturn per acre nor in preponderating degree to the higher prices of produce, but chiefly to the action of the British Government in the securing of internal peace, in the preparation of a reliable record of rights and in the reduction of the demand and its fixation for a long term of years. These records and decisions were as binding on Government as upon the people. Writing of the famine of 1838-39, in the United Provinces the Special Officer said: "Their land was totally valueless unless they could cultivate it; it had no market price, for no man would buy it or make advances upon it as security so that their only resource was to become paupers or perish." In Bareilly, as an example, a cultivated acre brought an average price of Rs. 4-6-6 in 1823; of Rs. 7-10-8 in 1843, and of about Rs. 15 in 1860. In comparison with the land revenue, the average selling price of land in what is now the United Provinces was one and one-third in 1837, and five times in 1860. In the Punjab the change is even more striking; in 1859, the average selling price of revenue-paying land was a little more than four times the assessment; ten years later, it was eighteen times the assessment. In 1875-76, it was 30 times, and at the present day, it is over 250 times the assessment.

There has, of course, in the same period, occurred a considerable rise in the price of grain, but this is much less than the rise in land values. In the famine of 1838-39, the price of wheat never rose above $11\frac{1}{2}$ seers a rupee compared with a normal for that period of 36 seers. Nowadays a normal price for wheat may be eight to ten seers, and in times of scarcity it may rise to four seers. Very little calculation is required to show the enormous rise in the price of land in terms of food-grains, or to put it differently, to indicate the value of the enhanced credit based upon the land when used to purchase food in times of drought. Herein lies the explanation of one feature of all recent famines; the absence of the peasant proprietor class from relief works. The landless labourer class has not behind him this new source of credit, and when prolonged drought makes all agricultural operations impossible for long periods, his position rapidly declines into one of acute distress.

The rise in the value of land as a source of credit would, however, alone be of little use unless there were in existence the capital available in liquid form to meet demands for accommodation; nor would it suffice in the long run unless exhaustion were avoided by the ability of the landowner to redeem in times of plenty the debt incurred to tide over distress. Both conditions have been fulfilled by the development and improvement of communications, which have facilitated trade, opened up new markets, and stimulated the expansion of commerce. One important result has been a marked accumulation of wealth. The failure of the local food supply arising from drought affords to trade an opportunity for enhanced activity and legitimate enterprise; but there was not in earlier days either the capital or the organisation to enable opportunity to be seized. In the Orissa famine of 1866, the private traders proved too weak to meet the demands upon them; they were unable to overcome the difficulties in the way of importing food; prices became merely nominal and money was spurned as worthless. A similar lack of strength amongst traders was disclosed in the Ajmere famine of 1868-70, when men with money in their hands died for want of food. Measures designed to improve the lot of the cultivators alone could not achieve their object until they were supplemented by others aimed at removing obstacles to trade. The great lesson from the Orissa famine was the need for more extensive and better communications. As has already been remarked, a famine is always a local calamity; it could and did occur when in other parts of India there was an unsaleable surplus of food. But there was neither the means of hearing of such surplus nor the facilities for its rapid transport to the point of acute demand. The changed position is illustrated by the history of the severe drought of 1895-97 which affected an area of 225,000 square miles in British India, with a population of 62 millions. The areas over which intense and severe distress prevailed were greater than in any previous famines, yet private trade proved itself able to regulate the supply of food throughout India; the uniform level of prices all over the country testified to the effect of the extensive system of railways in facilitating distribution, while the unprecedented success of relief measures was clear indication of the possession by the community as a whole of a reserve of strength which enabled it to meet the most widespread distress on record.

In the period intervening between the Orissa famine of 1866 and the severe drought just mentioned, the internal communications of India including the Punjab underwent almost a revolution. Metalled roads and railways, posts and telegraphs were introduced from the West with results which throw into clear relief the economic position of the country prior to their day. They have

stimulated that growing organization of trade and commerce which has proved one of the most important factors in increasing the resisting power of the people. They have brought that practical certainty of finding a market which has encouraged production, and they have made possible that accumulation of wealth which is reflected in the investment of funds in a multitude of improvements. They have been some of the most potent factors in breaking the vicious circle of economic stagnation, and in setting this province on the road to better things.

Irrigation naturally received consideration whenever severe drought intensified the appreciation of India's dependence upon a season's caprice. If there was ever danger of interest in the subject lagging, the re-awakening would come from the vagaries of a monsoon. Wells, tanks and canals have been in use from the earliest times, and although the aggregate achievement from both public and private sources is enormous, the work of planning and construction still continues unabated. The matter will be dealt with later, but calls for mention here because no scheme for a rapid enhancement of production on a large area could hope for financial success without efficient means for the distribution of the produce. Railways were as essential to the big canals as canals have been to some of the railways. Neither canal nor railway could be built without capital, and capital might have waited upon the enhancement of production which only rail and canal could give, were it not once again for the intrusion of a factor from outside in the form of loans. The first railway in India was sanctioned as an experiment in 1845; by 1859, construction on a large scale had been undertaken, and in spite of interruptions due to many causes, the Punjab is now well served.

The growth of irrigation works under Government has made great strides in the last fifty years, until now the total area in India so covered is 28 million acres. The total capital invested in all railways is about 733 crores. Practically all this sum has been raised by loan, mostly in London. The fact that such loans could be raised in a succession of years is itself proof of the growing credit of the country, which in its turn is based upon its rising prosperity. As agriculture is the main industry of the people, it is largely upon the growing prosperity of agriculture that this credit has been founded. The effect of the investment of such a sum in stimulating production and efficient distribution needs no emphasis; of the 65 crores earned by the carriage of goods, half is derived from agricultural produce. Of the 38 crores spent by passengers, a large proportion comes from the cultivating classes. The old self-sufficing type of agriculture is in some measure being replaced by a more commercialised system by the cultivation of money crops, such as cotton, jute, oilseeds, etc. The cultivator

has begun to look beyond the personal needs of his family; the demands of the market are determining what he shall produce.

Two other big factors, both again external to India, have exercised a great influence upon the whole rural outlook. In 1869, the Suez Canal was opened; and the tramp steamer with its cheap freights and comparatively rapid transport, followed shortly after. How great has their influence been may be illustrated by the growth of the overseas trade of India. The greater portion of the commodities sent overseas are the products of agriculture, cotton, jute, oilseeds, food-grains and tea being the chief items.

The large development of the export trade has been secured after providing for the increasing population. That production has increased is beyond dispute; some is due to the enhancement of yield resulting from the expansion of irrigation, much more to the spread of cultivation. Apart from the effects of irrigation, it is doubtful if there has been any appreciable increase of yield per acre due to better methods of cultivation, or to the spread of manures. That great progress has been achieved by the agricultural departments is undeniable, but their influence has so far extended only to a fraction of the total area. In such an old country, no surprise need be felt that a system of tillage based upon experience should have reached a stage beyond which further progress must await scientific discovery. That in many places the system followed has attained a very high standard is well known; and the wisdom of many agricultural proverbs stands unchallenged by research. Within the conditions surrounding the ordinary worker, the experts have found much difficulty in suggesting improvements. Still the fact remains that the cultivator has met new demands from breaking up new areas rather than by intensification of method, the employment of more efficient implements, or the use of manures. The careful terracing of the hillsides, the various methods of irrigating from wells, and tanks, the construction of accurately aligned channels from the streams to the fields, and similar achievements in the improving of the land disclose skill, ingenuity and patient labour. Although they affect but a small portion of the area under crops, and though the works were simple and their benefit was narrowly confined to their immediate locality, their importance in the aggregate is considerable and illustrates the willingness of the people to effect improvements without the aid of Government when such improvement promises a fair return for the labour.

That the general position of the agricultural classes has been greatly improved is beyond dispute, the commercial class has risen to wealth and importance, and, apart from these, numerous others

have in the last eighty years found remunerative sources of occupation and employment.

Enough has, perhaps, been now said to indicate the means whereby the position of comparative stagnation has been changed to one of steadily increasing prosperity. In the briefest words the change is mainly due to internal peace and the improvement of communications and means of distribution; in short by the development of trade and commerce by the removal of all obstacles and the provision of facilities. The cultivator is the main source of the outgoing trade and the biggest market for the incoming; the distributor has linked him with the consumer of his produce and with the manufacturer of his wants. In times of plenty he can get a price for his surplus, in time of scarcity he can buy at a reasonable rate; previously a bounteous harvest brought him no benefit, while a bad one brought ruin; he can now produce beyond his wants in the certainty of a return; he is becoming an economic man. He is now in the world's trade. Of the attempts being made to deprive him of all the good free trade has brought him, some account will be given later.

CHAPTER II

SOME PRELIMINARY FACTORS

The shortage of external influence in agriculture—and of historical records—which affords free play to sentiment—and therefore makes study of the province essential—especially in the towns—where the value of agriculture is apt to be forgotten—and where accurate ideas are necessary—on the financing of agriculture—especially productive investment instead of mere money-lending—The Punjab town should appreciate its dependence on the country—and therefore its interest in its development—especially as the great landlords have failed in their duty—Agriculture changing in two directions—production for sale—or commercialization—which leads to misunderstanding—which points to the need for the study of rural economics—The Punjab not far behind in introducing scientific agriculture—but politicians may do harm through well-intentioned advocacy of harmful ideas—what exactly is “scientific improvement?”

Nothing, perhaps, ^①blunts observation more than unchanging acquaintance with the thing to be observed. The visitor will be attracted by that which the resident passes by unnoticed. What is a matter of custom is apt to cease to be a matter of thought. Some stimulus, such as a marked discomfort, is required to attract attention. Cumulative causes of poverty may be present for years, perhaps for generations, without exciting remark, until a severe famine leads to enquiry; popular misconceptions or beliefs may persist in the presence of easily accessible evidence in refutation, but, until the obvious truth is forced upon the consideration of the people, there may be little or no attempt to put these beliefs to the test. In the Punjab, situated as it is in a corner of India with deserts on three sides, there are special causes which account for the general omission to appreciate that there are such things as problems calling urgently for investigation and research. In a country with a sea-coast and harbours, trade and commerce with other parts of the world, and easy access to distant ports, there is generally sufficient intercourse with people of widely differing views to enable new ideas to permeate through old customs and old beliefs. England is blessed with a geographical situation that has put within reach of her sons unique opportunities for discovering what is going on in other parts of the world. Her debt to such rivals as Holland, France and the States that are

now included in Northern Germany is incalculable. Not only did craftsmen and cultivators from the continent migrate to England, but Englishmen, from one cause or another, were constantly travelling abroad; there was thus a prolonged interchange of ideas, and it is to the credit of the early English that they were not only receptive but were also enterprising enough to try to improve on the ideas they imbibed. In the Punjab, the successive invasions that have left such marked traces on the habits and customs of the people, and have contributed so much to their present racial composition, were not from the East or South where ancient civilisations existed, but from tracts to the West where developments in arts and science had not reached any helpful stage of progress. The successive invasions of England have all left results of immense value; those that afflicted this province for so many centuries were less prolific in material advantage, while they exerted marked influence in interrupting the growth of economic organisations. England is almost unique in the prolonged period of practically unbroken internal peace, which has lasted from the conquest of 1066 to the present day; such disturbances as have occurred have not involved widespread destruction of institutions or of the records relating to them. The result is that England possesses continuous evidence of her history in original documents, as well as in survivals of ancient tradition (1). This province possesses little of any considerable antiquity in the way of contemporary documentary evidence of past history; it has yielded to the investigator coins, inscriptions, copper *sanads* and traces of old civilizations in quantity, but there is yet lacking that continuity of record which is essential to perfect understanding as well as that detail which is necessary for comparison with other countries or present circumstances. There are no old libraries containing the original writings of the wise men of the past; in the special sphere of agriculture there do not appear to be any old books of fame or merit. Such information as is available suggests that this ancient art has made little progress for many centuries. The Old Testament contains descriptions that are applicable to conditions prevalent in the Punjab to-day (2). A Punjabi would find familiar many scenes sculptured 5,000 years ago in the tombs of Egypt, while the excavations at the ancient city of Taxila have disclosed the implements of thousands of years ago which differ little from those in use around the same site to-day.

(1) Some other European countries possess wonderful records, but not in equal detail.

(2) As will be seen later, the same remark may be made about parts of Southern Europe.

This absence of historical record may be responsible for the attitude generally held towards economic questions. Existing conditions are now much as they were in ages past. They have become customary. Poverty is customary. India is regarded as a poor country, so naturally the people are poor. If poverty attracts the attention of publicists, it is ascribed to whatever happens to be the popular butt of resentment at the moment. But poverty is an economic fact; it is due to economic causes; it calls for economic remedies. (It is a feature of almost all countries and all peoples that the responsibilities of those people for their own condition is apt to be ignored, and the blame is apt to be placed on factors beyond their control.) Over and over again, populations oppressed with misery and distress have turned to political remedies for the alleviation of conditions which are due to their own defects; disorder, strife, disturbances follow; the misery and distress are increased, and the one remedy open to the victims is not only neglected, it is too frequently prevented from exerting its fruitful influence. Purely political remedies seldom prove effective cures of economic ills. They can do a vast amount of harm; their record for economic good will with difficulty be traced in the history of positive achievement. It was not until the impotence of political agitation to improve their economic condition had become manifest to the working classes of England that they embarked upon that great campaign of self-help, now commonly known as the Co-operative Movement. The excessive importance attached to the political question in Ireland has, according to Irish writers, proved a serious factor in weakening the character of the Irish farmer as a producer of wealth. Sentimental appeals in favour of constitutional change turned his mind away from the more practical questions of his daily life with the result that having acquired what is called "Self-Government" he has lost the prosperity he enjoyed when he concentrated his attention on the problem of his own economic regeneration. For the main question was one of poverty and its solution seemed to many patriotic Irishmen to lie in the widespread adoption of co-operation. Able, intelligent and sympathetic leaders came forward to lead their people on the road of organised self-help which leads to prosperity; but there were others in the field who seemed to regard general economic prosperity as an obstacle in the way of the growth of that political discontent they were anxious to stimulate in support of their campaign for constitutional change. The years of solid, patient, persistent hard work required to effect lasting economic improvement offer little attraction to the weaker minds which are easily misled by the wonderful promises held out by visionary politicians. There are always many too willing to leave to a government the work they

ought to do for themselves, and there are few candidates with the courage to warn the electors that they can only assist, and can offer no substitute for, the hard work men must do for themselves.

At a time when great constitutional changes are being prepared, there is great need for a widespread recognition of the fact that economic improvement must come through the effort of the people themselves. Whatever may be claimed for political measures as aids to industry, it seems that legislatures have little capacity for assisting small holders of the type general throughout India; it is the people who must provide the self-help, co-operation, improved trustworthiness and mutual trust, thrift, enterprise and an untiring determination to win by hard and honest work whatever local conditions of soil, climate and markets can be made to yield. The Ministers of the future will have to study rural economics, to make a close examination of local conditions, and to illuminate their studies by careful comparison with corresponding conditions in other countries dependent on agriculture if their efforts to improve the economic position of the people are not to prove barren of good and perhaps even productive of harm. The present is both a suitable and an unsuitable time to make such a plea; unsuitable because immense harm throughout the world is being caused by a blank refusal to accept economic teaching; suitable because only a return to the dull and sober paths of economic truth can offer real relief from the depression born of folly. Facts and not sentiment must dominate policy; the world of to-day is full of the sad results of the ignoring of simple truths in favour of dreams drawn from the imagination of ill-educated idealists.

It needs to be emphasised that economic ills require for their cure economic remedies. The choice of remedies must obviously depend on the ills to be cured, and it is on these that attention must first be focussed. There must be such an examination of the existing economic situation in the Punjab as the material, available for the purpose, permits. If from that examination there emerge some of the causes of the prevailing low standard of living and low standard of production, and if for these causes some remedies can be found and applied in practical fashion, then some at least of the claims of the economist will be made good, and it will remain to the politician to press forward such legislative or administrative measures as may seem to be necessary. It was a close study of the evils arising from the excessive fragmentation of holdings that led to the movement for their consolidation; the Punjab Alienation of Land Act followed a prolonged examination of the manner and extent of the expropriation of landowners by moneylenders; and, similarly

careful scrutiny of the indebtedness of the people has led to proposals for amelioration.

The Punjab is essentially an agricultural province. But it is far from unique in this respect. It is, in fact, merely one of many States, similarly dependent upon agriculture, and from all (1) comes the same cry of poverty, and in nearly all there is now greater or less effort being made to examine the causes and to devise remedies. Rural England provides no exception. Everywhere the cultivators of the soil seem to have failed to increase their incomes to the extent demanded by modern requirements. Poverty is a relative matter. It does not seem to be true that the cultivators of this province are, on the average, less well off than cultivators of Japan or of the countries bordering on the Mediterranean; it does, on the other hand, seem to be true that nowhere in the world up to 1920 was there to be found so large a body of cultivators, so prosperous in proportion to the requirements of their lives, as the colonists on the Lower Chenab Canal. It may be stated further, without fear of contradiction, that no other body of cultivators in any country can afford to spend the crores of rupees on litigation that the Punjabi cultivators spend. The Punjabi is far from being as poor as he is sometimes represented; and as will be seen, he has before him a fair prospect of achieving greater prosperity than is open to his fellow in many other countries.

A brief survey of conditions in rural countries appears to disclose a considerable unanimity of opinion on three points. Agriculture has been neglected; agriculture has been undergoing a slow change which is completely altering the position of the cultivator towards his calling; and, if it is to be restored to its proper position as the chief source of the wealth of the world, there is required a close study of the science and art of rural economics. Some further discussion of these three points is necessary to the argument.

The Punjab, like most other provinces of India, is almost entirely dependent on agriculture for the food of its people, the raw material for industries and for the commodities of commerce, including those exports which are necessary to pay for imported goods. The position in India is becoming better understood; the Fiscal Commission reported:—In any survey of India's present

(1) Except perhaps Denmark, the best co-operatively organised country in the world. But it was only when Denmark was on the verge of ruin and bankruptcy following on the disastrous Prussian War and the overwhelming of European agriculture with American wheat that it found a way to economic salvation in co-operation.

Over a hundred years ago (1821) William Cobbett wrote of farm conditions in Gloucester, "the labourers seem miserably poor. Their dwellings are little better than pig-beds, and their looks indicate that their food is not nearly equal to that of a pig. Their wretched hovels are stuck upon little bits of ground on the road side."

economic position, the outstanding feature must be the predominant importance of agriculture. No less than 224 million people representing 72 per cent. of the population were returned at the census of 1911 as depending for their livelihood on pasture and agriculture. Whatever may be the developments on the industrial side, it is hardly possible to contemplate a time when agriculture will cease to be, what it always has been in India, the occupation of the great mass of the people(1). Agriculture is, and must remain, the foundation of the economic life of India, and this not merely because it furnishes the livelihood of three-quarters of the population. Indian industries cannot flourish without a prosperous Indian agriculture. Agriculture is largely the provider of the raw materials for industry, and the Indian agriculturists will offer the main market for the products of Indian industries (2).

The Industrial Commission reported much on the same lines (3):—The present position and future prospects of Indian Industries depend to a very large extent on the products of Indian agriculture. We take this opportunity of stating in the most emphatic manner our opinion of the paramount importance of agriculture to this country, and of the necessity of doing everything possible to improve its methods and increase its output. We consider the improvement of agriculture necessary, not only because it forms the basis on which almost all Indian industries must depend, but also for the further reason that the extension among the people of a knowledge of improved agricultural methods and in particular of the use of power or hand-driven machinery, will benefit agriculturists both by adding to their income and by its educative effects... Agricultural progress will be inevitably followed by a general rise in the standard of living which will create a much larger demand for manufactures than now exists, and thus provide within the country a market for the products of the increased industrial activity which our proposals are designed to secure.

(1) Ch. III. Para. 26.

(2) Para. 80. The fact, so often ignored, that agriculture will provide the raw materials for the future industries of the province may be illustrated by the possibilities of cotton seed. In England and America, the fine lint is removed and graded and is used in the manufacture of explosives, paper, artificial silk, cellulose and felt. When pressed the seed yields a crude oil which is separated into edible oil, hydrogenated oil, soap-stock, pitch, fine oleins, and stearine; the residual cake is used for cattle food. In America decorticated cake is ground into meal; from which cotton seed flour is produced for human consumption. Mr. Brewis, from whose report the above is an abstract, warns his readers against small scale mills; the decorticating system is very exacting. Some day Punjab capitalists will turn to Mr. Brewis' Report with greater interest than they do now.

But already several flourishing Punjab industries are based upon agricultural products; sugar manufacture is under trial; there are over 350 cotton ginning factories, with several thousand gins, single roller, double roller and saw, while small rice hulling plants are working wherever rice is grown in quantity.

(3) Para. 84.

The land constitutes not only the greater part of the wealth of the province but it is almost the sole source of new wealth ; upon it, to greater or less extent, will depend the industrial future. And yet, with a few honourable exceptions, it receives insufficient attention from the educated. The complaint is almost universal(1). Amid all the rush of improvement in other callings, agriculture seems to advance but slowly. The farmer has been the forgotten man. The land until recently has lacked the attention of the trained intelligence and the keen brain. It ever returns what is put into it ; and because what has been put into it has, for generations, been what tradition has dictated and not what modern science would prescribe, it has yielded the same poor return. A very little consideration will illustrate this neglect. It is well-known that certain tribes have a greater reputation for good husbandry than others, that some succeed in extracting from the soil far more than their neighbours, that an Arain, for instance, is generally a better farmer than a Jat Sikh, a Jat Sikh generally better than a Muslim Rajput while even a Muslim Rajput can usually show his fields with pride to a Baluch or Pathan of the Indus Valley. If all the land in the Punjab were tilled with the same skill and care as that bestowed by the best cultivator, the additional annual increase to the wealth of the province would be immense.

It is obviously unsatisfactory that the total production of the soil should be so considerably below what it would be if the output of all those engaged in agriculture came up to the level of the most skilful. It cannot be sound policy for a country to have its most important industry in such a condition that it is doing less well and producing less wealth than may reasonably be expected ; and in spite of these obvious truths, many people deplore poverty and yet overlook one of its basic causes, their own disinclination to do all that lies in their power to show the way to greater production.

There is little public opinion against the sale of bad seed, or the mixing of cotton or the deliberate addition of barley and dirt to Punjab wheat. The educated people of the province are awakening to the need for action calculated to improve the

(1) It is not confined to the educated class in the Punjab or in India but the charge is levelled with good reason against the educated townsman in England, America and elsewhere. In England the paramount importance of agriculture was only brought home to the educated townsman when he found himself, at one period of the war, unable to get enough to eat. The possibility that such a result may follow on the neglect of agriculture was ignored and will probably be ignored again.

[This rather prophetic remark in the first edition has been fully justified by later history. The fervent interest of the public in agriculture stimulated by the war has died away in England and the nation has largely reverted to its previous attitude of indifference. The Conservative Party has recently tried to arouse fresh interest].

standard of living but hesitate to support specific measures. Indeed, to them may be applied the remark made by Arthur Young in 1788 :—"The nobility of France have no more idea of practising agriculture and making it an object of conversation than of any other object the most remote from their habits and pursuits."

It is not only that too little interest is shown in improvements in technique or in the neglect of such methods as have been proved profitable, but other factors of importance in the progressive development of the province fail to attract the attention they deserve. The financing of agriculture is one and the interest charged by the financing agency is another. The point deserves close consideration, for if it is difficult to convince the general public of this country of the great importance of the rate of interest in regard to the development of industries, little surprise need be felt at the inadequate appreciation of the paramount influence of the rate of interest on agricultural progress. It is not so much that a low rate of interest allows of a larger margin of profit as that a low rate of interest permits of a profit being earned on many enterprises which otherwise would never be undertaken at all. The average of the net profits of all Indian railways was, when this book was first written, a little under 8 per cent. If this may be assumed to represent the normal expectation of the return from new lines, then the question whether these new lines shall be constructed or not, must depend on the rate of interest at which capital can be borrowed. Similarly there is a limit to the rate of interest which a farmer can afford to pay for borrowed money and derive a reasonable profit for its use. Some improvements will yield a good profit even if 20 per cent. has to be paid on the capital borrowed to carry them out, while others will barely allow of 3 or 4 per cent. The rate of interest thus frequently decides whether a loan is "productive" or not; it may determine the question as to whether a farmer should hold up his crops for higher prices, as the higher price may be no more than the price at harvest time increased by interest for the period between harvest and sale; or it may decide the question as to whether it will pay to use artificial manures which improve the crops for, say, two years. It is perhaps unnecessary to point out the overwhelming importance of securing a profitable investment for all the capital available in the country in some productive employment, and yet, since this book was first published, there has been a very large increase of money sunk in mortgages, in postal savings banks and cash Certificates, none of which benefit the province. Agriculture is, before all else, the prime source of the new wealth of this province; if, by wise employment of capital, the land can be made to produce an additional yield sufficient to cover interest charges and leave

such a profit to the cultivator as will encourage him to further enterprise, then the owner of the money gains by the interest, the cultivator by his profit and the whole country by the additional wealth produced. In an industry subject to the law of increasing returns, a low rate of interest will facilitate the investment of so much capital as may be required to enable the manufacturer to reap the full benefit of large scale production while at the same time enabling him to reduce the price of his articles to the consumer. In such a case the gain is general. In agriculture, especially in a country of peasant proprietors, the interest factor is often ignored. So much so that the actual net earnings from some plots of land may easily be less than the fair interest realizable upon the sale price, so that the labour expended receives no remuneration from his toil over and above what he could get from the interest on the sale-value of his land. The average cultivator is not good at arithmetic, and interest is very much a matter of arithmetic. He wants money and gets it and complains that he gets into debt. He is not able to work out the profit and loss on the different undertakings that make up his year's work.

The ordinary commercial banking system has grown up amongst commercial men to meet the needs of commerce; it was not designed and is not well adapted to meet the needs of agriculture, and particularly of an agriculture on the petty scale found in India. No good banker will advance without security, and all good bankers try to arrange their loans and repayments so as to be evenly distributed throughout the year. For security he desires something tangible which he can keep under his own care and which he can sell if the repayment is not promptly forthcoming; few cultivators can offer this; their cattle are wanted on the fields, the growing crop into which so much capital has been sunk is not a negotiable commodity, and, in this country at least few agriculturists have chattels or furniture of sufficient value to make suitable security. Moreover, cultivators require their loans all at almost the same time and offer repayments also about the same time when the harvest has been dealt with; there is thus a periodic demand for loans and a periodic repayment, with blank months between. Bankers will advance "crop-loans" for six months but not as a principal part of their business; they will allow overdrafts on their personal knowledge of the farmer's integrity and general credit-worthiness, but so much of their capital comes from deposits at call, liable to be withdrawn at any time, that they dare not lock up too much for the comparatively long periods required by farmers. In England where many of the smaller banks have now been amalgamated into five great institutions, these latter do in fact freely sanction overdrafts to meet the farmers' current needs; but they do not

recognise it as their business to grant loans for improvements the return from which will be spread over several years. In the Punjab, as in the rest of India, the number of banks (including branches) is, relatively to England, very small, and, centred as they are in the larger towns, these are not in touch with rural conditions. They are anxious to undertake more business with cultivators on a short term basis and would welcome transactions with those who have good (that is to say easily realisable) security to offer and who are sufficiently businesslike to appreciate the importance of adhering rigidly to their side of the contract. The vast majority, however, of the Punjab cultivators are unable to comply with these requirements, and like the farmers of many other countries they have to look elsewhere for the credit they require, to the money-lender, the shop-keeper or the implement dealer; and they seldom appreciate the cost to themselves of this method of borrowing. Of this more will be said later, for the present the important point that it is desired to bring out is that, from whatever source the farmer derives the capital he requires for his industry, he has to pay for it a higher rate of interest than that at which a man in business in a town can usually borrow, and even when the nominal rate is the same, there are frequently incidental costs which result in the payment of exorbitant real interest charges, or, perhaps it would be more accurate to say, result in the total cost of borrowing being very high. For instance, even when a farmer gets credit from a bank the bank is usually in town far from his fields, and the farmer not only loses the value of his day's work in going to and fro, but frequently has to pay the expenses of his sureties, including those for travelling and food. On a small loan, these add very considerably to the cost of borrowing(1). The aggregate drain on the Punjab cultivator involved in maintaining an army of petty money-lenders must be very great. It is true that the high rate of interest charged, is largely justified by his own lack of business method, but he is only one party to the transaction and the high interest makes difficult the repayment of principal. The Punjab Banking Enquiry estimated that agricultural debt had increased from 90 crores in 1921 to 135 crores in 1930.

There seems to be some malign fate which exposes this industry, the very foundation of civilization, to influences detrimental to its proper development. Wealth results from the productive employment of capital; a farmer may spread his resources over a large area, as for instance, a ranch on the American continent or

(1) Cf. *Irish Report on Rural Credit*, p. 31:—It is very frequently the custom for the small borrower to repay his obligation to a surety by giving his free services for a day or longer on the farm of the latter, or by furnishing the grazing of an animal, or the loan of a horse, or by conferring some similar benefit.

concentrate on the intensive cultivation on a small area, as for instance a fruit or vegetable farm. Probably most farmers combine extensive cultivation on the larger part of their holding with the intensive cultivation of a small part reserved for specially valuable crops. Whatever method he adopts, he finds that, broadly speaking, his holding returns, over a period of years, a steady income on the capital employed, that the greater the sum of capital he can productively utilise, the greater will be his net return. The finance of agriculture for productive purposes is thus a matter of great importance. The more the cultivators can develop their agriculture on modern scientific lines, the greater is the certainty of a progressive increase in wealth; and with this should go a steady increase in capital.

Shortage of capital in the hands of tenant farmers is said to be a cause of backward farming in England; in the Punjab this is true to a limited extent only as there seems to be considerable difficulty in discovering methods whereby capital can be productively invested by the ordinary cultivator.

Unfortunately in this province, very little of the capital that flows towards the land is devoted to its improvement; most goes to purchase from an existing owner, who, too often, sinks to the position of a tenant⁽¹⁾. The investment of crores of rupees in land purchase does not of itself add an ear of corn to the wealth of the province. The reduction of proprietors to tenants increases the evils of tenancy. On the other hand, there can be set off against this the fact that, in some tracts, good industrious tenants are acquiring land from thriftless owners. In the Hoshiarpur Tahsil, for instance, it is said that Sainis, Arains and Gujars, who compose the chief tenant classes, are becoming owners at the expense of the Rajputs who are less efficient cultivators and possess holdings larger than they can cultivate. In such a case, land purchase is a benefit to the province at large. Unfortunately, prior to the passing of the Land Alienation Act, the tendency was for land to pass into the hands of those who had no intention or inclination to cultivate it themselves or to develop it to its utmost productive capacity. Since 1901, opponents of the Land Alienation Act have foretold that land will be purchased by money-lenders of agricultural tribes, who will rent it to tenants, who may be the former owners bereft of the chief incentive to industry. Here again the same objection would arise that land purchase absorbs capital that could better be devoted to improvement. Inquiry, however, seems to show that this danger is not materialising, except in the south-western districts. There are a few agriculturist money-lenders who are acquiring the land

(1) See ante *The Price of Land and its Effects*.

of their neighbours but the extent of their operations is small, and may be regarded as negligible in effect.

Besides capital, for the production of greater wealth from the land there will be required a higher technical and business training of the cultivators, and for this there will be necessary a continuance of the efforts now being made to adopt the educational system to rural needs and to bring teacher and teaching into closer sympathy with the cultivator(1). All hope of progress must depend upon the proper growth of a sound public opinion, based on an appreciation of economic facts. Hitherto, the vast schemes that have added so much to the prosperity of the country have originated with Government. In the new order, more and more reliance will have to be placed on the opinion of those in whose hands political power will rest. From these there must emerge leaders, possessed of sound economic sense, or the decline of the one great national asset will be inevitable(2). The present attitude towards agriculture must give place to a real live interest in rural economics; it is essential that this should be a well-informed interest, that the non-cultivating portion of the community should realise how the progress of agriculture reacts on their own prosperity, how this progress can be stimulated and how retarded, and to what extent and in what manner they can play a worthy part in the great task of rural reconstruction on sound economic lines. The interdependence of town and country is so complete, that the lack of practical appreciation of the logical consequences is difficult to understand. As the American Businessmen's Commission wrote:—

Agriculture is not merely a way of making money by raising crops; it is not merely an industry or a business; it is essentially a public function or service performed by private individuals for the care and use of the land in the national interest, and farmers in the course of their pursuit of a living and a private profit are the custodians of the basis of the national life.

The difference between good and bad farming not only makes all the difference between growing or declining trade and commerce, but it affects the cost of living of the whole population. A sound agriculture ensures financial stability, and financial stability is the rock on which all lasting progress must be founded. The greater development of agriculture will not compete against other industries, but will rather assist them in providing the

(1) See Rural Education.

(2) See Rural Leadership. The point may be exemplified in the pressure brought in the Legislative Council to curtail expenditure on the maintenance of the great canal system, to deny the money necessary to keep it in proper repair and to reduce water rates until the system becomes unproductive.

wealth, the raw material, the man-power and the market without which they cannot exist(1).

In most countries there is a marked tendency for the more educated and more intelligent people to concentrate in the towns, with the twofold result that the countryside loses its more enlightened residents and the emigrants to the towns lose their interest in agriculture. The Punjab is no exception, and it is of great importance that the townspeople should realise the extent to which their own prosperity is linked up with that of the cultivator's and should accept responsibility for doing what they can to encourage the development of agriculture on modern scientific lines. If the agricultural classes insist on retaining the land in their own hands, the townspeople have a clear moral right to insist that the land be put to the most productive use. It was a Japanese worthy who remarked that some patriots do not seem to realise what a quiet, homely every-day thing true patriotism is. For many generations to come the truest patriotism for a Punjabi should be the concentration of effort to increase the annual output of wealth from the land.

Unfortunately for this province, with a few honourable exceptions, the larger landlords seem to devote little attention to their estates. In England and Scotland, it was the large landlords who took the lead in the agricultural revolution, and it was the larger farmers who led the way in adopting improvements. Their self-interest was of national value(2). But here, although in the canal colonies, and occasionally elsewhere, well-to-do landlords, who live on their land have shown interest and adopted improved methods, and although several from amongst the non-agricultural class have been leaders in this respect, it remains true that in the province as a whole, it has hitherto been not the rule but the exception for the big owners to take a prominent part in developing agriculture, and to set a good example in spending money on land improvement. Indeed, it is hardly incorrect to say that in the colonies, the peasant grantee is more enterprising in the care of his squares than the landed gentry. It is true there are many instances where inundation canals have been constructed, embankments built and wells sunk, but these affect but a very small proportion of the whole cultivated land in the province. Of improved seed or implements or better methods of cultivation,

(1) For an interesting exposition of the argument, see Sir H. Plunkett's *Rural Life Problem of the United States*. It is worth noting that as far back as 1463 it was recognized in England that the land was the great fund of national wealth from which taxation was paid, and therefore whatever led to a rise of rents was a gain to the whole community, since the fund from which the revenue was drawn was increased. In the Punjab, it is all to the interest of the townsmen that greater wealth should be produced from the land so as to give increased purchasing power and increasing volume of commodities for trade and commerce.

(2) *English Farming—Past and Present*, p. 161.

little knowledge seems to be possessed or desired. An interesting sidelight is thrown on the general discussion by the Chakdars of Multan. Here the neglect of the proprietors, whether from apathy, lack of capital, or other causes, has afforded opportunity to the well-to-do members of the trading class to slip in between them and their tenants as Chakdars; the Chakdar usually pays a rent in cash to the landlord, he sinks a well and sublets the land to a tenant paying rent in kind. The difference between the rent thus received and the expenses of the well, cash rent paid, etc., constitutes his nett profits. In 1859, the Settlement Officer wrote that "it is almost entirely owing to the existence of these Chakdars that this district owes its present state of comparative prosperity. They are almost invariably wealthy *Kirars*, who by the application of labour and capital have greatly improved the productive power of the soil. They never rest satisfied until they have realised for themselves a handsome profit of nett rent." In general the big owners take little trouble to develop the latent potentialities of their land and to insist on a higher standard of cultivation by their tenants; there are exceptions and in the last ten years interest has been increasing but the fact remains that on most large estates the outturns fall well below the average obtained by the farms under British management.

The pre-eminent position, once occupied by English agriculture, was in large measure due to the realization of the fact that the administration of the land was accepted as an important factor in the efficiency of production. The landlords were not, as too frequently in this province, merely rent receivers; they equipped the farm with most of the permanent capital necessary for its working and wielded a considerable influence in deciding the system of farming. If a tenant contemplated any new enterprise or met with any considerable difficulty, he looked to his landlord for aid and support. On the other hand the landlord was prepared to invest more capital in the land where he could rely on his tenants to make an adequate use of it and to maintain the estate in a proper condition of efficiency(1).

(1) It is interesting to note that English landlords were equally neglectful of farming, until about 1700 the lawyers and merchants from the towns began to buy land and invest money in it. Their example aroused the richer owners and some gentlemen of education and position took to agriculture, the result was great progress that continued until the gentry went off to the American and French Wars of 1775 to 1815.

Thorold Rogers found English agriculture stagnant for centuries, it was not until the eighteenth century that the art "progressed by leaps and bounds, and this was due to the fact that during the eighteenth century the great landlords were the most zealous students of agriculture, and the boldest experimentalists in new methods of culture." (Vol. V, Preface.) In other countries, where peasant proprietorship prevailed, it needed the threat of ruin due to the invasion of American wheat to stimulate the cultivators on the European continent to adopt those measures which have now placed their industry on its present

There is no desire among the English
tenant to turn back his association
with landlord, i.e. ³² become the
owner himself

It is frequently stated that agriculture needs more capital for its fuller development, and the English system whereby the landlord supplies most of the capital required has been found in practice to be the best that could be devised(1). At any rate it is worth noting that amongst the English tenant farmers (e.g., of Oxfordshire) it is said that there is not the slightest indication of any active desire to terminate their association with landlords or to assume the greater responsibilities of ownership. Where a large area of any country is cultivated by tenants, the fortunes of agriculture depend not only on the properties of the soil but on the nature of the relations which exist between the two partners. Landlords must support their tenants as far as may be consistent with sound economic management, and should exert their influence to secure from the tenants a high standard of farming. Where both parties are possessed of ability and understanding, there are many examples to show that agriculture compares well with many industries as a basis of investment(2). More will be said later on the subject of tenancy; but from the above it will be clear that the success of any system of land tenure depends upon the spirit in which it is worked; unless the landlord rises to a full sense of his responsibilities, agriculture will remain stagnant, and the neglect of many big landowners in the province to aid, support and stimulate their tenants to improve their methods of production cannot but have serious consequences to the general prosperity. In the Punjab, many large owners advance sums to their tenants and many hesitate to collect all the rent which is due; but, in general, they fail to insist upon good cultivation, the use of good seed, the utilisation of good stud bulls and the conservation of manure. The simple fact that under the management of the Court of Wards the incomes of estates generally rise indicates the room for more efficient administration by the owners.

Latterly the failure of landholders to get the best out of their land has led to pressure in one form or another being brought to bear from outside. The Great War brought into public prominence the problems of food supply and there has been a marked tendency for government to frame definite policies aimed at agricultural development. In the United States the system of high protection

prosperous level. No one advocates that this province should await the threat of starvation before adequate steps are taken to produce from the soil all that modern science could extract, yet this policy of waiting holds the field outside the narrow circle in touch with the Departments of Agriculture and Co-operation.

(1) Cf. Professor Carver's view, — *Principles of Rural Economics*, p. 227. The best agriculture in the world is carried on under the tenancy system in Britain. It does not pay a farmer to buy his land as he can get a better return by investing the money in stock and equipment.

(2) Cf. J. Orr: *Agriculture in Oxfordshire* Ch. VI. This and Chapters VII and VIII deserve careful perusal.

for industries has re-acted so unfavourably on agriculture that State aid seems to have become imperative. In England, the industrial interests demand cheap food for their workers and cheap raw material for their manufactures, both in quantities far beyond the capacity of the country to produce. The result has been a subordination of agricultural interest to those of industry and a serious decline in the prosperity of farmers. It is now being realised that it is not in the national interest that agriculture should be left to itself without public support and scientific guidance; it is becoming recognised that agriculture has special claims on the nation and should receive such assistance as the State may most suitably afford(1). In Japan, it is said that "the farmer with his agricultural code is told exactly what he may and what he may not do—how his fields must be cultivated, what conditions are prohibited, and along what lines he is encouraged to go. The Government runs experimental stations and informs him as to the best lines to be pursued. Most of this advice he is more or less compelled to carry out....Under Government auspices, farmers' guilds were established, which brought about mutual aid, the development of scientific agriculture, common purchase and credit. Eventually membership in these guilds was made compulsory on all farmers (2)."

But the power of the State to assist in the development of agriculture is limited and for most improvements reliance must be placed on the education of public opinion and on the imbuing of landowners with a proper appreciation of their responsibility. In this respect the outlook is definitely improving. Many of the larger landowners are awakening to the possibilities of securing enhanced profits from the use of pure seed, new implements, and better methods of cultivation; but there is great need for continual pressure on tenants to adopt these measures. The sale of new implements is as yet infinitesimally small, the number of harrows in use is minute, and only the use of improved seed seems to be spreading at all widely. There is in this no ground for pessimism. It took the English farmer a hundred years to adapt himself generally to the new husbandry advocated by the great writers of the eighteenth century, and all critics complain of his

(1) *Eg.*, grants for research in all sciences related to agriculture.

(2) W. M. McGovern: *Modern Japan*, pp. 162, 235-6. The quotation is given for what it is worth. It is doubtful if India in its present mood is ready for so much Government interference and Government compulsion as exists in Japan. In that country, it has been in readiness to subordinate personal feeling to the public good that has made phenomenal progress possible. As an example it may be noted that while formerly for the consolidation of scattered holdings, the consent of two-thirds of the owners concerned was required, now the consent of a bare majority is enough. (*Of Japan Year Book*). It is doubtful whether in the Punjab any compulsion would be approved.

represents the wealth that is potential. He is the most important factor.

conservatism. The great truth which emerges from the foregoing discussion is that the soil represents wealth that is only potential; the extent to which this is converted into actual means for increasing human satisfactions depends upon him who tills it. He is the most important factor. He is apt to be slow and needs stimulating from outside. He must not be neglected. The relation of the farmer to the soil was well put by Thorold Rogers over fifty years ago:—"The student of agricultural history... will find that what economists call fertility, is not only that of the earth and the sun, but of that acuteness, skill, foresight, and diligence which constitutes the best qualities of a competent husbandman in our day. Fertility is and must be in the soil, but it is still more in the intelligence of the man who handles the soil. The former kind of fertility is, and may remain, a capacity only; the latter is an energy(1)."

If the Punjab is to enjoy all that its great potentialities offer, the human element must be aroused to a fuller sense of its responsibilities. The subject is important and will be treated at greater length in a later section(2).

The second feature, regarding which, as has been pointed out, there is considerable unanimity of opinion, is that agriculture has been undergoing a slow change along two distinct lines which is completely altering the position of the cultivator relative to his calling, the first is the development of production for sale in addition to the demand from the home, the second is the introduction of scientific method and teaching in place of old empirical ideas. The first is well illustrated by the fact that while about 1871-73 the Punjab exported only four lakhs of rupees worth of grain in a year, this later rose to over fourteen crores worth, and there has been a similar expansion in the exports of cotton and oil-seeds. In other words, the cultivators of the province are growing proportionately less for their own needs and proportionately more for outside markets. The great expansion in the area cultivated, which has been rendered possible by the construction of large canals, is chiefly responsible for this development. A considerable area of the land, newly broken up, has been devoted to crops for export, and the export trade has become a matter of close interest to the rural population. As

(1) Thorold Rogers: *History of Agriculture and Prices*. Vol. IV, Ch. XXVI.

(2) The remark is true of the cultivating class of most countries, see for instance the following criticism of Ireland:—"The present tendency of the small holder is to go in for mixed farming, either because his father did, or because it seems to be the easiest thing to do, or because there is a generally accepted idea that the farm should be, as far as possible, self-supporting and self-contained.... Every district must be specially adapted to some particular form of production and it should be the object of instruction to make full use of that suitability."
—*Better Business*, November 1920, p. 43.

an American Commission remarked: "Agriculture has been constantly moving towards production for a market rather than for direct consumption by the farmer;" the self-sufficing condition is weakening and the general Indian and outside demand for agricultural products is now beginning to affect the choice of the cultivator. The price of wheat in a Punjab *mandi* depends, not on local conditions, but on the price in Liverpool, which is the world's chief secondary market, and on the cost of transport between the two places or it may be seriously influenced by a bumper harvest in Australia. In former days, the cultivator grew for the needs of his household; even now it is customary for the same holding to contain a little plot of hemp for rope, a little plot of cotton for the womenfolk, and so on. But in the more progressive tracts, it is coming to be realised that it may be advantageous to grow a more profitable crop for sale and to buy the needs of the household from the proceeds. That is to say the cultivator is beginning to see that he must live, not on the products of his holding, but on the profits derived from it. For the present, the province seems to have arrived at the stage at which the tendency is to grow that which is most readily saleable. The cultivator has not yet reached the point when he will be able to choose that use for his land which will yield the highest net profit. He has not yet the knowledge required to enable him to tell for what crop his land is best suited. He still grows wheat, not because wheat yields him the maximum net profit on his labour and land, but because everyone around him grows wheat, because wheat is readily saleable and because, with the water available, it is an easy crop to grow. He knows that potatoes and fruit bring in more money, but, apart from inherited prejudice, he knows that he may not be able to find so ready a market for these products. The cultivator, it will be seen, is beginning to be influenced by world prices and by problems of marketing. He is passing from what has been called the self-sufficing to the commercial stage; and markets and the fluctuations of market prices are for him matters of growing importance. He is producing not what people want him to produce but what it will pay him best to produce(1). His crops, being in the main saleable crops, can now form the basis of credit; they are readily convertible into cash and so are available as security. If this credit can be wisely directed into productive channels, the next step will be for the cultivator to concentrate the greatest amount of capital on his land that his intelligence and technical knowledge and ability will enable him to use with profit.

(1) He is never likely to reach the stage prevalent in large areas of Ceylon where the cultivator is mainly concerned with products for sale: tea, cocoanut, areca nut, rubber, spices and so on, and buys his rice from Burma.

This steady change is curiously misunderstood. Although mankind, outside a few scattered areas, has long since left behind the pastoral stage, when his wealth was counted not by his land but by his cattle yet in the Sind Sagar Doab and other backward tracts, the people are still essentially keepers of flocks; and there is little difficulty in recognising, in other places, the different stages through which agriculture proper has passed. The oldest known form of cultivation is found in parts of Bengal, Assam and Burma, where it is known as '*jhum*'; wandering tribes burn a space within a forest, destroying all trees, bamboos and shrubs, and cultivate it for a few seasons and then pass on to another place where they repeat the process. The damage to the forests is considerable and in some areas has led to landslides and erosion. It is unknown in the Punjab. Surface tillage or stationary agriculture is found in the West Punjab; alternating agriculture requiring fallow, is by far the most common form; while convertible husbandry, in which the need for fallows is dispensed with, is becoming general around the larger towns. Those who deplore the scarcity of *ghi* and deprecate the breaking up of waste land, are in reality sighing for a reversion to the pastoral stage. Could they have their way, the whole prosperity of the province would disappear, trade and commerce would decline, and famine and starvation would reign over the land until the population had been so reduced that the remainder could find sustenance on the small amount of food produced in a pastoral era. But in this book, the assumption is made that the progressive increase of wealth and prosperity is desirable, and accordingly all energy and effort should be directed towards pushing on the commercialization of agriculture, and not to pushing back the clock of civilization several hundred years.

To some it may appear that it is yet too early to speak of the commercialization of Punjab agriculture especially outside the great colonies. Some writers appear to regret the export of large quantities of wheat when the internal price is high, and there are a number of people who are ill-fed and so would seem to deplore the growing tendency to produce for a market rather than for home consumption. These seem to overlook the fact that the farmer, like every other worker, must seek the best return on his labour. If the quantity of wheat surplus to the local demand could not find a market, it would not be grown. It matters little to the grower whether the consumer is in Europe or Bengal, he will not continue to grow what he cannot sell(1). Similarly

(1) About 1857, the zamindars of Narowal tract (Amritsar) were called upon to pay two instalments of land revenue at once, and were obliged to borrow from the Sahukars. The latter converted their valuables into money and paid the proceeds into the tahsil on behalf of the zamindars. From these they received

*Agriculture has been passing
from the customary phase to
Economic Phase* 37

no one in Lancashire or Bombay would dream of advocating any restriction on the export of cotton goods because many of the poor there were ill-clad. Objection was at one time raised to the efforts that were being made to grow a superior type of cotton that could be used in the Lancashire mills. This cotton cannot be easily used on the indigenous spinning wheel and is too good for the low counts of cloth usually made in India; but neither of these considerations should influence the farmer, if the new cotton yields him a higher net profit. To promote prosperity and reduce poverty, more wealth must be produced, and as there is a limit to the additional area from which this may be done, it is essential that increased wealth must be produced from the same area, that is to say that the same area must be made to produce crops yielding a higher net profit. As modern natural science yields up new and ever newer secrets of agricultural progress, the cultivator will not only be able to produce more wealth from the same land, but he will be in a position to invest capital in his undertaking with greater and greater confidence. The extent to which he will in practice do this will depend on the certainty he feels of securing for his product a price sufficient to repay him for his enterprise. Thus the very ancient art of agriculture passes from the old customary phase to an economic phase as science advances(1), and it is neither sound sense nor sound sentiment to attempt to keep the cultivator poor just because some other people are poor.

Just as the townsman inclines to buy his food in the cheapest market, whether the food come from the surrounding fields or from abroad, so the cultivator in his own interests must seek to sell in the dearest market, irrespective of whether the consumer be his neighbour or a foreigner. The middleman to whom he sells is equally absorbed in securing the highest margin of profit. A consumer in India is in no sense handicapped by an export trade; the market is open and he can buy with the rest. The actual export trade is not controlled by the producer, and the blame for dear food should not be thrown on to the grower nor, in justice, on to the actual exporter. The best hope for Punjab agriculture

grain. But the price of grain fell. The market was glutted and a large portion could not find a sale and was in consequence injured. The Sahukars lost heavily. (Memorandum by Mr. Blyth on p. 98 of the printed report).

(1) Cf. Nourse, p. 18. In this connection the following extract from Cunningham's *History of the Sikhs* possesses some historical interest:—

In India no one thinks of investing capital or of spending money on the improvement of the land, excepting, directly, a few patriarchal chiefs through love of their homes; and, indirectly, the wealthy speculators in opium, sugar, etc., through the love of gain. An ordinary village headman, or the still poorer ryot... has just so much of the produce left as will enable him to buy the necessary seed, his own inferior food, and the most simple requisites of tillage; and as he has thus no means, he cannot incur the expense or run the risk of introducing improvements." (First published in 1849).

~~rests in the receipt by the cultivator of a full return for his labour and this is best secured by free trade in agricultural products ;~~ a man will not continue to work that others may gain, and he will be less inclined to improve his methods if he finds that the benefit accrues to someone else. If there is to be an adequate stimulus to better agriculture, it will be found in the higher reward resulting from the adoption of more scientific measures ; and anything that serves to diminish that reward will to this extent diminish the stimulus to better agriculture. The commercialization of agriculture, then, is the best, as well as the necessary, means to that increase of yield which is essential to the growing prosperity of the country.

Sufficient has now been said as to the neglect of agriculture and the change that is taking place towards the commercialization of the industry. Both point to the need for the close study of the science and art of rural economics, if the land is to be restored to its proper position as the chief source of new wealth in the province and almost the only source of the raw material of industries. As it has been assumed that there is a general desire for increasing wealth and prosperity, there should be little need for argument to show that the study of the means whereby this increasing wealth and prosperity can be attained is necessary to secure the end desired. The true scope of economics has been described as the study of the forces which contribute to the growth of the social income or public wealth and which regulate the shares of classes and individuals in this flow of wealth(1). Rural Economics or agricultural Economics is primarily concerned with the study of all the factors which contribute to the production of wealth from the soil and to the better remuneration of him who works upon it. Jouzier defines it as the branch of agricultural science which teaches how to organize the various elements which constitute the resources of the cultivator, whether in relation to each other or with respect to persons, in order to assure the greatest prosperity to the enterprise. It aims at putting into the hands of cultivators the most complete intellectual equipment possible for the pursuit of their calling and placing at the service of administrators a knowledge of the best methods of conducting rural matters in order best to advance business and make wealth (2). Now that farming has become a business, the farmer must become a businessman and must learn the methods of success

(1) Seligman : *Principles of Economics*, p. 23.

"The science of rural economics must not be confused with the study known as farm management, which is designed to teach practical farmers how to employ their resources to the best advantage." O'Brien—*Agricultural Economics*, p. 3.

(2) Cf. Nourse : Introduction, also Gillette : *Constructive Rural Sociology*, p. 3.

in business. As he grows to sell, he must study the factors that make up the cost of producing his crops; the study of farming costs is now becoming more widely recognised as important to good farm management and to a sound agricultural policy. The Agricultural Tribunal of Investigation wrote:—"In this country (Britain) at the present time there is need for much more statistical investigation and economic study of the problems of agriculture. There has been, comparatively speaking neglect of investigation and of teaching on the business side of farming. The modern industry of agriculture must rest upon the basis of comparative costs of production and marketing."

These words apply with greater truth to the Punjab where until recently the statistics collected were demanded for assessing land revenue or for securing warning of scarcity, and not to enable estimates to be formed of the returns earned by landlord, cultivator and labourer.

The cultivator must also understand the factors which influence the price obtainable in the market for such produce as he proposes to sell. The markets of the world and the methods of other farmers all over the world affect the daily life of every tiller of the soil, for if any class of farmers can undersell him by using better methods, he must copy those methods or suffer. As agriculture provides the raw material for many industries, the farmer must study what those industries require and how far he can expand production with profit to himself(1). He must not confine his activities to meeting the local demand if higher profit is to be gained by growing for a distant market, and so his view must extend beyond his own immediate neighbourhood. Ignorance of rural economics led to some strange results when, in the middle of last century, vast stretches of virgin soil in America were first opened up to cultivation. The immediate effect was a great abundance of cheap wheat which was transported in large quantities to the British Isles and the European continent. This great influx of wheat from America was a factor quite outside the control of European farmers, and its far-reaching consequences were ill-understood at first. It was a new economic fact that upset the old routine, and the peoples affected dealt with the threatened ruin to their industry in ways reflecting the differences in national character. The Scotch, regarding home agriculture as definitely submerged, organised societies to encourage emigration to the lands where the new wealth was being produced. The English landlords, instead of insisting on better farming,

(1) He must, for instance, become acquainted with the industrial utilization of by-products such as cotton seed, if he is to secure full value for such products. Cotton seed in India is fed to cattle, but the seed can be made to yield several other articles of value and still leave a residue for cattle food.

reduced rents and converted the fields into pastures, while rural workers turned their attention to the growing industries of the towns. The Irish made of the invasion of American wheat a grievance against the English. In Belgium, Holland, Denmark, etc., there being no political grievance to bear the blame and no generous landlords to bear the loss, the people were driven to work out their own salvation by means of new forms of agriculture organised on co-operative lines. In Germany, co-operative credit was advocated by Raiffeisen, and the new system soon gave opportunity for the introduction of modern methods of scientific farming(1). The new factor, on the European continent, proved a great stimulus to agricultural improvement; more capital was employed in artificial manures, more profitable crops replaced wheat and the co-operative principle began to secure recognition as the one form of organisation not only suitable to agriculture but essential to it. The fact that the biggest and most important industry in Europe was threatened with ruin by the import of cheap wheat, naturally led to the study of the various factors involved in the rise and fall of agricultural prosperity. Up to this time economists had paid little attention to agriculture as distinct from land tenures and rent, etc. It may be that, as the industry is subject to the law of diminishing returns, the more enterprising may have preferred to invest their capital in those manufactures which yield an increasing profit, and economists naturally turned their attention to the problems of these new concerns; or it may be that the inadequate appreciation of economic writers of the possibilities of what science could do towards improving crop production, led them to refrain from the discussion of a difficult subject. In England, sound common sense has ever served the country well in the absence of scientific study.

(1) Scientific farming may be said to date from the publication in 1840 of Liebig's book, *Chemistry in its Application to Agriculture and Physiology*. It traced the relations between the nutrition of plants and the composition of the soil and completely changed the attitude of contempt, founded on ignorance which agriculturists generally had maintained towards chemistry.—Curtler: *Short History of English Agriculture*, p. 275.

The Royal Agricultural Society of England was established in 1838, the Rothamstead Research Station was started in 1843, and the first Agricultural College was opened at Cirencester in 1845. It is only within the last fifty years that in most countries special departments of the State have been established to deal with agriculture as in the United States seventy years ago, in Great Britain in 1889, in Ireland in 1900 and in Scotland in 1912.—*Cf. Agricultural Tribunal of Investigation*: paras 157, 230.

The first proposal for a special Department of Agriculture in India was made by the Orissa Famine Commission of 1866, it was revised in 1869. The term "Agriculture" first appeared in the title of a member of the Government of India in 1871. The Famine Commission of 1880 recommended Departments of Agriculture with Directors in all provinces, and gradually the present Departments came into being, first as collectors of statistics, and later, after the Famine Commission of 1901, as scientific bodies.

So far back as 1463 it was recognised that restrictions on the export of grain, which led to farmers and others selling their corn at low prices, caused detriment to the whole kingdom, as the prosperity of agriculture was considered indispensable to the welfare of the country, even if the consumer suffered(1). In this country, the essential accuracy of this view still lacks recognition, and the town still cries for measures that may cause widespread loss in the attempt to secure a little cheaper food. Ignorance of rural economics may thus lead to unwise administrative measures that may aggravate the very evils they seek to cure. It is no part of the farmer's duty, it is no part of his business to provide food for the urban consumer if he can get a better price elsewhere; just as it is no duty of the urban consumer to buy from the local farmer if he can get his goods cheaper elsewhere and just as the mill-owners of Bombay buy cotton from the Sudan and Egypt instead of from within India if this suits their business better. The proper remedies for high prices are increased production, more economical production and the removal of unnecessary obstacles to, and avoidable charges in, marketing(2). It may be urged that such an argument appears to support a clash of interest between town and country, and to encourage a selfish attitude on the part of the farmers. Such a view would be erroneous. As has already been pointed out, town and country are so interdependent that the country can never suffer without the town suffering too, or be prosperous without the town being prosperous too. Individual exceptions can be recalled, but speaking generally, in a province like the Punjab, the interests of the country are the interests of the community as a whole.

In pressing for a wider study of rural economics, it may be desirable to make it clear that this does not necessarily involve a neglect of other matters, usually reckoned as possessed of value in life. In the ultimate end, all life rests on a physical basis; man must get his food, and therefore his living, from the soil. But, as the able author of *England's Green and Pleasant Land* has pointed out: "The work of making an agricultural class able, must be barren if it is not joined to the work of making that class understand that farming is merely a means to an end, and that end a good life, for farmers and everybody else." Though progress does not consist wholly of material advance, it does seem to be true that improvements in minds and morals are not found without it. The civilization with advanced methods of production is, in fact, found amongst the cultured, the politically progressive

(1) Cf. Curtler : *History of English Agriculture*, pp. 69-70.

(2) With, of course, increased production in other spheres so as to raise the purchasing capacity of the people, see *ante* the price of wheat.

and the emancipated peoples(1). No pure form of social and domestic life, no high type of morality, says an American writer, has ever been developed among any people except where it has been organised around some kind of productive work(2). Wealth and luxury based on the serfdom of others have never proved lasting.

There is one other consideration : the forces of the material world, as has been pointed out by an eminent writer(3) are more powerful on their own plane than the forces of light, and are continually thrusting into a kind of powerless pre-eminence the religious, cultural and political ideals ostensibly ruling the minds of men(4). Where, as in the Punjab, there is diversity of religious, cultural and political ideals, the unity of the people may yet be brought about by the recognition of an identity of economic interest. The problems of agriculture and of rural life are the same for Muslim, Hindu and Sikh, and as these are so closely bound up with the social life of the village, the needs of the social life too tend to be closely similar. So far as the villages are concerned, economic and social interests are almost common. Every one can well work for the prosperity of all and leave each party its own special spiritual outlook.

The spheres of economics and ethics are not the same ; but those who advocate the claims of religion or of a better social order are apt to trespass on the ground of the economist, and may, unless they are wary, find themselves preaching doctrines, the practice of which leads to the very opposite of what they desire. On the other hand, wider recognition is being accorded to the consideration that morality has an economic value ; sobriety and honesty make for the efficiency of labour ; improvement in social welfare, education, the proper enjoyment of leisure, all contribute to economic progress, and much that was formerly regarded as altruism is now appreciated as profitable. In pressing, then for a wider study of rural economics, there should be no fear of opposition from those whose attention is more attracted by man's spiritual needs ; while, were mankind less prone to prejudice, there should be prospects of more real unity of effort than seems capable of achievement along political, religious or other lines. It is almost impossible for a rational-minded being, living in the Punjab, not to desire its improvement in prosperity ; it ought to be impossible for such beings to withhold their aid and support from a campaign that promises to be so fruitful.

(1) Gillette : *Constructive Rural Sociology*, p. 25.

(2) Carver : *Principles of Rural Economics*, p. 24.

(3) *Rural Reconstruction in Ireland* : Preface by G. W. Russell, (A. E.).

(4) Marshall (p. 704) says the chief foundation of the place that England has won for herself in the world has been that deep set firm resolve to concentrate energy on things which make for solid and enduring results.

Under the new scheme of government, there will inevitably arise demands for interference in the economic sphere prompted by a natural desire for better conditions for some one or other section of the people. When the constitution is no longer a matter for political controversy, and where foreign relations are debarred from discussion, as is the case in Provincial Legislatures, the activities of the Ministers will largely be concerned with the promotion of the economic interests of the population. As the Punjab is predominantly rural, there will be grave risk of mistakes being made, unless sound knowledge of rural economics can be spread abroad. History shows how easy it is to advocate the wrong thing, and how easy it is to adopt measures that promise good results to the short-sighted. Unless the factors that contribute to prosperity are well understood, it is difficult to see how they are to be encouraged. Unless the habits, customs and deficiencies that make for poverty and distress are well recognised, it is difficult to see how they are to be eradicated. There are people who appear to think that if the export of wheat were prohibited, it would still be produced and the price would fall; they would not apply the same argument to cloth manufactured in Bombay, for its fallacy is too apparent. There are people who think that the food supply of the country would be increased by a measure that would impose a heavy burden on production, not realising that already large areas are cultivated which do not yield a fair return for the labour expended. In short there are far more wrong policies than right ones and while almost any one can suggest a wrong one, the world still awaits the discoverer of right policies in many spheres of human activity.

Religious feeling prevents much good food from being consumed, and more good food from being produced. Where sentiment rules, the economist can only point out the truth and endeavour to save the people from making mistakes that may lead to poverty and distress. The political leader must know the economic view if he is to avoid leading his followers to destruction. Where there is lack of adequate knowledge of agriculture and of the conditions requisite for agricultural prosperity and progress, there is great danger that measures may be adopted whose result can only be economic decay. Good intention is no excuse for ignorance and will not serve to protect a man from the results of his own folly; and even the most sincere "National Sentiment" should not justify measures inflicting incalculable harm on whole provinces. Accurate knowledge must form the basis for any legislative measure that is directed at some economic end. It is the business of the Rural Economist to investigate the various elements that constitute sound agricultural progress; he is not an advocate of any policy, but the knowledge that he

collects will not be ignored with impunity. It may, however, fall to him to expose the fallacy in a policy under contemplation, and to direct attention to an alternative that promises better results.

It would be easy to give from contemporary publications examples of fallacious reasoning on important subjects. Several resolutions have been proposed in the legislative assemblies that could never have been discussed amongst those with a knowledge of economics, and the increasing attention to public affairs is resulting in the proposal of remedies for admitted ills that could only serve to aggravate the evils complained of. The danger from the neglect of Rural Economics is considerable, and it can only be avoided by encouraging the study of this very intricate science. The most immediate danger is that the student will meet with rebuff from the ignorant when expounding the most obvious and simple truths. Where there are people who will not learn, there is risk of disaster. If there are any people who have made more experiments and more mistakes in parliamentary government than the English, their history is unwritten. But the English have learnt much from past errors; they have realised the difficulties in the way of finding short cuts to prosperity through legislative enactments; they are beginning to understand the value of knowledge gained by laborious investigators, and they are showing an increasing willingness to listen to those who have been able to devote more time to study special questions than is possible for the ordinary man. A somewhat similar attitude will be needed in this province in the future. Up and down the world there have been innumerable efforts at governmental interference with economic forces; the experience gained cannot be ignored with impunity; what is required is such a comparative study of conditions in the Punjab and other rural countries, and of the attempts at improving these conditions as will suffice to guide the new legislature safely along the path to progress. Needless to say most of the guidance will consist of warnings and admonitions; positive directions will be rare. In the end it will be found that it is the human factor that will determine the rate of progress as well as its path; legislatures can do little more than remove obstructions and provide opportunities.

It may be that some readers will gather the depressing impression that the Punjab is backward and that it is too late to embark upon an organised campaign of progressive improvement. These forget how modern is the scientific study of agriculture. It is only within the last fifty years that most countries have established State departments of agriculture. In Britain this was done in 1889, and even to-day in Great Britain there is still

great need and great scope for the economic study of the problems of agriculture. The comparative study of costs of production, of marketing problems, and of the business side of agriculture is barely out of its initial stages. Already the Punjab has made a beginning under the Board of Economic Inquiry, and if only sufficient interest can be aroused and maintained, great results may follow.

In the foregoing the importance of introducing more scientific improvement into the agriculture of the province has been stressed. To this it is sometimes objected that the cultivator lacks the education to adopt scientific methods and that, anyhow, an increase of production would soon exhaust the soil and leave him worse off than ever. The point was ably dealt with by Mr. Howard in his presidential address to the Indian Science Congress, in January 1926. He pointed out that great progress has been made in agriculture by purely empirical methods before ever science was applied to it and gave as instances the high degree of perfection in the growth of rice in the delta regions of the great Indian rivers and on steep hill sides ; in England he mentioned the great progress in the breeding of live stock and the four-course system of rotation.

It is difficult to define exactly what is meant by an "improved" variety or by "better" seed, but the main difference lies in the greater efficiency of the seed to deal with the contents of the soil. A good motor will do more work on less petrol and oil than a poor one, and improved seeds do not necessarily take more from the soil than defective seeds, but give better results from the same material. In some cases the advantage of a new seed may lie in earlier ripening or in some more highly valued quality in the grain or in resistance to pests or to unfavourable climatic conditions or in some other quality that gains a higher market value. It is not necessary to have scientific knowledge to be able to reap the advantage of some scientific discovery and the Punjab cultivator need not hesitate to make the fullest use of what scientists offer.

Land reflects the farmer.

CHAPTER III

THE HUMAN FACTOR

The value of human character in agriculture—the incentive to effort—the burden of the unnecessary middleman—the dislike of local taxation—the fertile brain versus the fertile land—the urban movement—the neglect of agriculture—the growth of the towns—their apathy towards the chief industry of the province—Rural Education—raised to a high level by the Department of Education—the new leaders—the influence of women—technical training in agriculture—health and energy—Rural leadership—local difficulties—the value of the Co-operative Movement in rural leadership.

In dealing with the economics of agriculture, it should be unnecessary to stress the importance of the human factor, and yet it is this human factor which is so often omitted from calculation in discussions on the subject. The cultivator has a reputation the world over for never being satisfied; instead of searching for defects in his own methods he always seems to be grumbling at something else. The Government does not treat him as well as he thinks he ought to be treated, the soil is defective, the weather is capricious, the market is falling just as his crop is ripening, the bumper harvest will exhaust the field for next year, and so on. He seems disinclined to realise that other industries have their special calamities, and that the character of his land is very much what his own effort has made it or allowed it to become(1). The difference between the worst land and the best, in old agricultural countries at any rate, reflects the difference between those who have handled it, and even in the Punjab the richest crops are found where capital and labour have been most freely expended. Where, as in India, knowledge of modern scientific agriculture is limited, it is often unintelligent cultivation that accounts for the low yields. It is not sufficient that the cultivator should be industrious; he should possess the knowledge and ability to apply his labour in the right direction, and the capital requisite to employ it to the best advantage. Little progress can be made if the human element is unfitted for it. No difficulties seem able to deter where the people possess the character,

(1) Cf. *Agriculture in Oxfordshire*, p. 130; also Seligman : *Principles of Economics*, p. 45.

the grit and the strength to fight through. Indeed the greatest skill is usually developed under the greatest difficulties. As Professor Carver says: "Communities and nations have remained poor in the midst of rich surroundings, or fallen into decay and poverty in spite of the fertility of their soil and the abundance of their natural resources, merely because the human factor was of poor quality or was allowed to deteriorate or run to waste"(1). It is the absence of well-directed human effort that has allowed thousands of square miles of culturable land in Spain to lie barren or to remain so ill-cultivated that the production of cereals is only about one-fourth of the average return per acre given by other European grain-growing countries(2). It has been well-directed human effort that has converted the old deserts of the Punjab Doabs into prosperous agricultural tracts. Natural resources are merely the material which the work of human beings converts into wealth. English soil was not naturally fertile but centuries of intelligent labour, perpetuated by an almost uncanny intuition of the value of the land as the great source of national strength, has so improved it, that the outturn of crops was for a long time unsurpassed. The rich appearance of an English country side is the result of from 400 to 600 years of manuring and improvement. The first great work on agriculture was written over 600 years ago(3), and, with few set-backs, progress has been steady and continuous to a degree that residents in this country find it difficult to realise. Neglect can turn the best land into the poorest, and the worst land can be converted into the most fruitful by human intelligence and energy. It is this fact which accounts for many of those differences which some people prefer to ascribe to political causes. As an Irish writer says: The wealth of a nation lies, not in the material resources at its command, but in the energy and initiative and moral fibre of its people; without these attributes no country can become permanently prosperous; with them, no unfavourable

(1) *Principles of Rural Economics*, p. 174.

(2) Ward: *The Truth About Spain*, pp. 166, 167.

(3) Walter of Henley wrote about 1250 a work which held the field as an agricultural text book until the sixteenth century; much of his advice is valuable to-day.

Cf. Curtler, *Short History of English Agriculture*, p. 31.

Mr. Curtler's work contains a wonderful record of trial and experiment, failure and success. It shows clearly the value of the human factor as compared with legislative remedies.

J. Orr in *Agriculture in Oxfordshire* p.131 says :-If the face of Oxfordshire to-day has a more attractive appearance than it had 700 years ago, if the fields give to the men who look to them for their living a greater assurance that they will be well fed than they gave to their ancestors and predecessors, the difference is not due to the soil, or to the climate, but to the fact that twenty generations of Englishmen have built up by slow and patient work a better and better system of getting out of the soil and climate what they want.

circumstances can long prove an insuperable obstacle(1). Unfortunately, few people like to admit their own demerits; while the temptation to lay the blame for all defects on someone or something else appears to be irresistible. However, if the Punjab is ever to attain the height of prosperity which seems to be open to it, every factor delaying progress or perpetuating present poverty must be examined and displayed; and, in this task, it becomes necessary to point out that the absence of a prolonged effort at constructive progress must be held responsible for much of the present condition of the people. Those who deplore the poverty of their country should compare its history with that of the one they envy. Wealth and prosperity are the result of creative industry; poverty may be due to its absence or to the existence of a system whereby the profits of industry pass to others. The burden of maintaining, in comparative idleness, a parasitic class may be too great for an industry to bear. In by-gone days it was a crowd of courtiers and nobles, soldiers and serving slaves, who deprived the cultivator of the profits of his labour and left him a bare subsistence in good years and rather less in bad. With the disappearance of these classes of non-producers, there came gradually to be more middlemen than were necessary; and with the rapid increase of prosperity under British rule, the village usurer appeared and plied his devastating trade. The cultivator has had little chance to show what progress he could make under adequate stimulus. As Mr. Keatinge points out, the small proprietor may be strong, industrious and intelligent; but if he is to do good work, he must be prompted by an adequate incentive and sustained by adequate food... when a cultivator is so heavily indebted that all the produce of his land, excepting a bare subsistence, must inevitably go to the money-lender, his incentive to strenuous work naturally decreases. He sees little prospect of extracting himself from debt, and he is fairly confident that the *sahukar* will, in his own interest, see that he does get that bare subsistence,..... the result is badly cultivated and undeveloped fields(2). The condition bordering on economic serfdom, into which many of the cultivating classes have been plunged by past oppressions of former rulers and present oppressions of unscrupulous usurers must be held responsible for much of the lack of initiative that is so characteristic of them. But, in addition to this, there seems to be something in the nature of their calling, that leads farmers to belittle the influence of their own effort on the yields obtained from the land. Not only in India but in other countries also, the farmer is inclined to approach nature in a

(1) *Rural Reconstruction in Ireland*, p. 16.

(2) Keatinge : *Rural Economy in the Bombay Deccan*.

1. The uncertainty of rainfall
 2. No big market for surplus product
 3. The agriculturalists are not ambitious
 4. Lack of knowledge of economic principles
- } They are responsible for low progress in Agriculture

passive attitude, almost a fatalistic attitude, accepting what the fields give up and seldom seeking to coerce them into yielding more. He is content just to go on farming. The keen competition which makes for efficiency in industries and for a constant examination of method seems to have less effect on agriculture. The cultivator feels external conditions such as soil and climate so potent that he is less inclined to review his own methods with the object of discovering defects and omissions; he accepts the yield as the yield of nature rather than of his own individual effort and so is slow to modify traditional habits and customs. Political philanthropists who have agitated for the break-up of large estates and for their partition amongst former tenants have been disappointed to find that the new owners tend to be satisfied with producing enough for their own requirements and fail to maintain the high standard of cultivation their former landlords exacted from them. Even in England, farmers are said to regard their occupation as providing a living rather than as a means of making money which can be extended and developed. Where the old idea remains that a farmer has to live on the products of his farm and not on the profits, any difficulty in marketing, any obstacle to the receipt of the full return on his labour, seems sufficient to deter him from the extra exertion by which alone can be produced the extra outturn. Of Greece, for instance, it is said that it is not the ambition of the peasant farmer to get as much out of the land as he can. The difficulties of communication limit his market and he is usually content if he can satisfy the wants of his household, with perhaps a margin of profit. Tradition and the influence of climate combine to make these wants few and simple, and so to restrict the amount of energy employed. In Greece, as elsewhere, it is, in one sense, a misfortune that the peasantry are contented with so little(1). Enough has been said to show that if the agriculture of a country is to be put into a state of progressive prosperity the cultivators must be encouraged by every legitimate means to develop their industry on economic lines; and, as few men work for the mere pleasure of working, care must be taken to impress upon them the idea that good farming and the good farm are the result of the good farmer, and to ensure that the good farmer receives the full

(1) Cf. Gillette: *Constructive Rural Sociology*, p. 162.

The Roumanian peasant is described as "unambitious and unthriftly, and generally content to live in a state of squalor." F. O. Handbook. *Rural Reconstruction in Ireland*, p. 256. The authors (p. 52) express the opinion that as a result of the long cultivated belief in the omnipotence of political change, Irish farmers began to ignore their own responsibility towards their industry. Cf. also Hall: *Agriculture after the War*, p. 26. R. C. Jebb: *Modern Greece*, pp. 104-108. *Agricultural Tribunal of Investigation* para. 67; Dr. Venn: *Foundations of Agricultural Economics*.

profit on his good farming(1). Anything that tends to deprive the cultivator of the profits of his labour militates against agricultural progress. There is ample evidence to show that a definite incentive is necessary to induce him to improve his methods; it is difficult enough to convince him that any improved yields he may obtain are not due to the favourable season but to his own initiative, and that while his unprogressive neighbour may get as good yields in a bounteous season he will get much less over a series of years. The task of the preacher trying to convince cultivators that good results come from improved methods is made all the harder in the Punjab owing to the capricious nature of the rainfall. It seems to be stubborn truth that no differences in yield obtainable from better seed or better methods of cultivation are comparable to the differences arising from seasonal conditions. It is under unfavourable conditions of rainfall and climate that the better seed and more careful cultivation show their superiority. The advocate of scientific agriculture has to admit that sunshine, rainfall, plant and animal diseases and pests all affect agricultural production to an extent far greater than any conscious action on the part of man, and therefore, there is solid reason for the passive attitude of the cultivator which shows itself in adherence to old ways and in disinclination for change. But it is also true that the better cultivator using improved seed will, over a series of years, get better crops than his less intelligent neighbour(2). Unfortunately, however, the tendency under discussion inclines the cultivator to underrate the value of education. When a man ascribes a good harvest, in large part, to natural forces outside his control and only in a minor degree to his own exertions, he is disinclined to listen to any advice to improve the efficiency of his labour. This attitude has, perhaps, in the past been strengthened by the unsuitable type of education offered. When, in almost every country, the farmer looks askance at the school, there would seem to be reason to believe that the school does not suit the farmer. The economic importance of evolving a type of education that

(1) An old farmer, on being asked where the best land in Oxfordshire was answered: "The best land is where the best farmer is." This may be saying rather much, but it is undoubtedly true that the best farming is where the best farmer is, and not where there is the best land. J. Orr: *Agriculture in Oxfordshire* p. 131.

(2) Mr. Keatinge writing of the Bombay Deccan says years of short rainfall have produced in the cultivator an exaggerated feeling that the outturn of his fields will bear little relation to his efforts.

Cf. also O'Brien p. 32: An English writer is of opinion that 75 per cent. of the variations in crop yields are the result of weather conditions. The Report on the agricultural output of England and Wales in 1925 states that the variation in yields which took place between 1885 and 1925 was due in the main to climatic conditions over which the farmer has no control.

will appeal to the cultivator can hardly be exaggerated in a country so dependent upon agriculture as is the Punjab. On this very difficult question of agricultural education more will be said later. It is ultimately connected with the tendency of the more intelligent and educated people to migrate from the country to the towns, a tendency which must next be discussed. So far as the argument has gone, some attempt has been made to show that, in a province like the Punjab, the lack of a strong general public opinion in favour of improving agriculture is of grave economic importance. The change towards the commercialization of the industry renders desirable organisation on sound lines, the increased use of capital, and the improvement in the education of the cultivator so that he may learn to use this increased capital in the most profitable manner. Unfortunately, the cultivator, as a result of various causes, is disinclined to make the extra effort required of him⁽¹⁾; he needs to be aroused to a proper appreciation of the prospects that await him if he will only bestir himself, and bring more intelligence, more industry and more capital to bear. This task of arousing the cultivator is not likely to be undertaken by the cultivators themselves and, unfortunately here, as elsewhere, (the people of the towns fail to recognise the importance of agricultural improvements to their own prosperity.) The townsman could do a great deal to stimulate the cultivator to greater effort by ensuring him a fair deal in the markets.² Standard weights and measures, higher prices for cleaner produce or more valuable staples and by sparing him from unnecessary charges. Those townsmen who own land themselves could do much by insisting upon their tenants and labourers adopting scientific measures of proved value.

Amongst a people with a high standard of living, only a small proportion of their income is spent on food and a large proportion on those other amenities, pleasures and comforts which make up their standard of life. Amongst such, there are a considerable number who earn their livelihood by providing these amenities and by rendering numerous kinds of service for which the people are prepared to pay with the result that the proportion engaged in the actual production and distribution of food is small. In India generally the standard of living is far from high; comparatively few earn their living by providing amenities and rendering service and the great majority are engaged in the

(1) As agriculture is the oldest industry, it is necessary to take long views. One cause of this disinclination has been the extremely limited market for Punjab produce prior to, say, 1880. Whatever spirit and ability to improve his outturn the cultivator may have had must have been depressed by the uncertainty of his returns due to widely fluctuating prices, and the lack of contact with markets for his produce before communications were created.

production and distribution of food. As there is, unfortunately, a caste division between those who work on the land and those who take the produce and distribute it, the fitness of the individuals for either career is of little importance. The result is that corresponding to the excessive number of people on the soil, there is also an excessive number engaged in trade, petty shopkeeping and commerce. Of the latter group, there is one to every 21 of the population; of bankers and money-lenders there is one to every 100. The number is too great for the work to be done with the result that a fair return on transactions does not yield much annual income, and as a further consequence there is a strong temptation to enhance earnings by resort to petty trickery, short weights, unfair charges and so on. To many the solution of the problem seems to rest in encouraging industries (of which more will be said later), but this is only one out of many possible alternative occupations. In other countries an increasing standard of living has opened opportunities for rendering services which are willingly paid for but for this it would seem that more wealth must first be produced from the soil.

This discussion on the human factor in agriculture cannot be closed without reference to a peculiarity of the rural mind that appears to be general. Cultivators live much with themselves, they are apt to resent advice from outside, and they are inclined to distrust the efforts of others to improve the conditions under which they live. This distrust extends to public bodies and they are usually found to be possessed of little enthusiasm for administrative councils entrusted with public improvements.) Of the American farmer it is said that he still clings to the traditional convention that it is unwise to expend money for the common good through governmental agencies. The tax for the support of government is one of the sore spots in country life. Cities have gone ahead developing many things on a community basis, such as streets, sewers, water supply and so on, paying for them largely out of public funds secured through taxation. The farmer does not care to spend money in this way and still looks upon public office as a means for supporting a host of unproductive parasites on the public purse. The farmer still looks upon government as a necessary evil to be limited in every way possible to the minimum of activity(1).

A somewhat similar feeling prevails in England. There it is said that although agriculture suffers from lack of facilities which ought to be provided by public authorities, the farmers adopt an almost hostile attitude towards the activities of administrative bodies. The prospect of an increase in rates, no matter in respect

(1) Vogt: *Introduction to Rural Sociology*, pp. 191, 192.

real life of farmers
money for
money cost

of what service it shows itself, seems to shock the farmer as if it were only the prelude of some vague but fearful catastrophe (1). He seems to see farming crushed out of existence by their weight. He forgets what local bodies have done for farmers. To some extent this may be due to the compulsory form in which new charges are imposed on rate-payers, but it is also largely due to the inadequate interest taken in the work of local authorities. The same may be said of the cultivating classes in the Punjab. They forget that the management of the whole district is as important as the management of a single holding, and that there must be many works of development such as good roads that would prove profitable to themselves and to their industry. The local rate is limited to a small fraction of the revenue, but any proposal to raise it meets with opposition, even though the need for new roads, new dispensaries, etc., is admitted. If marketing conditions are to be improved, if the present waste of wealth due to bad roads, preventible sickness, cattle disease, etc., is to be diminished and the rural areas thoroughly developed, this disinclination to pay more local rate must be overcome. To achieve this, it would seem to be absolutely necessary to spread abroad a sound knowledge of the economics of rural life and for this some system of adult education appears to be required.

A study of rural conditions in different countries of the world leads to the conclusion that far more depends upon the human factor than is commonly supposed. Higher outturns may be the result of higher intelligence rather than more fertile soil. It has been well said that the improvement of the man is essential to the improvement of production (2); and it is unfortunate that rural education has largely failed owing to the rural parent proving unable to appreciate its value in agriculture. Defects in character can and will nullify the richest gifts of nature; while what may appear to be insuperable difficulties are apt to disappear before the sustained application of human energy, human intelligence and human knowledge. Denmark is the classical example of a naturally poor country being converted into one of the most prosperous by well-conceived and well-directed effort. Throughout the world the cultivation of the land seems to lead to the appearance of similar characteristics amongst those so engaged (3). The cultivator is cautious and slow. He has found Nature's rules so rigid that he sees little room for divergent opinion

(1) J. Orr: *Agriculture in Oxfordshire*, pp. 93-95. "...the money spent on education appears to most farmers to be badly invested, and it would require a long argument to prove that it is a sound financial scheme."

(2) McGarr: *The Rural Community*.

(3) Cf. Balzac: Men living under simple and natural conditions are bound to be almost alike in all countries. Sincerity of life takes but one form.

about other matters; he suspects the politician with his short cuts to wealth; he suspects the townsman with his book knowledge; he is inclined to underrate the share of the harvest due to his own skill, energy and effort, and to see in his crops the bounty of nature or the goodness of God. Much in the way of calamity that foresight might have prevented he ascribes to the Divine Will. On the other hand, he looks askance at public bodies that propose to tax him to avoid a danger or secure some common good. Almost everywhere he is apt to underestimate the possibilities of his calling. He farms for a living; and so long as a living is forthcoming, he hesitates to put forth the effort that would bring him more. Yet, more than any other man, he knows that the fields of one do not yield the same as the fields of another; that it is the good farmer, rather than the good land, that will produce the best crops. Where he fails is in a peculiarly inadequate realization of his own personal responsibility for his own position. In examining rural conditions in such countries as Holland, Denmark and Belgium, the feature that stands out most is the effect of the character of the people rather than of their natural resources. It is not only the capacity for hard sustained work, and the willingness to put this capacity to the fullest strain, but there is a sense of the value of discipline, appreciation of the need for self-restraint in favour of the common good, of the need of the long-sighted view, and of subordination of the present to the postponed advantage, that occupy so large a portion of the picture. On the other hand, the effect of the actual constitution of the State is hardly discernible(1). The State may interfere, success seldom follows. The State may prohibit, but it is the farmer who decides. The State may assist, but there must be farmers willing to reap advantage from the opportunity. The State can do much to enforce measures which the farmers know to be good. It cannot induce them to do what they believe to be inimical to their interests(2). The land reflects the cultivator; the cultivator is convinced that he knows best what his land can do; he may be wrong; prolonged conflict with practical difficulties has given him a distrust of anyone who has not this same experience. The personality of the cultivator is the most important factor in

(1) Denmark has "put an end to the artificiality of a political state governed by lawyers, land owners or a privileged class, and an economic state separated and detached from the political state." Howe: *Denmark*. Preface vii.

Ibid. p. 14: "It is the peasants who slowly found a way out of the problems of the country."

(2) It is curious to find Arthur Young writing under date 12th January 1790: "Everything in this world depends on Government." The same idea seems to be inspiring the ministry of Agriculture in England to-day which, in default of co-operation amongst farmers, is adopting widespread State compulsion aimed at their good.

agricultural prosperity. If progress is to be gained, the cultivator must be trained to be progressive. If, in the past, the land has not received the treatment that it required, that neglect must be made good. No laws, no political changes can dispense with the need. Just as it is useless to press forward measures which the cultivator will not accept, so it is useless to propose measures without taking into consideration the peculiar characteristics of this class. If change is desired, a beginning must be made with the education and training of the man on the soil. The State possesses an almost unlimited capacity for causing damage; Spain affords an obvious example, Turkey another. It may, as in the Punjab, utilise its resources to stimulate agriculture and to bring to the land the water or other essential element that it needs. Such State enterprise will not of itself prevent decay, though it may postpone it. The fruits of such activities are only garnered when the cultivator responds in the manner required(1). In the end it is the character of the cultivator that counts. The Royal Commission on Agriculture expressed much the same view in its abridged Report: No substantial improvement in agriculture can be effected unless the cultivator has the will to achieve a better standard of living and the capacity, in terms of mental equipment and of physical health, to take advantage of the opportunities which science, wise laws and good administration may place at his disposal. Of all the factors making for prosperous agriculture, by far the most important is the outlook of the peasant himself.

The tendency for the towns to grow at the expense of the country is a feature of nearly all civilised States which has excited wide discussion(2). Its importance varies with the nature of the urban immigrants and the motives that incite them to migrate. Emigration from Ireland to the towns of America was a sign of agricultural decay, but a similar movement from country to town in England was largely due to rapidly increasing industrial activity. It is not a new feature. It disturbed King Richard II who about 1389 tried to stop it by an Act forbidding those who had served in agriculture until 12 years of age to be apprenticed in the towns and directing them to abide in husbandry. This Act was renewed a few years later because many agricultural labourers were becoming weavers; and, in later times, London was regarded as a source of great evil to the country by attracting the young and energetic thither(3). One result, so far as England is concerned,

(1) The Mazhbi Sikh in the colonies affords an example of this.

(2) Cf. Gillette: *Constructive Rural Sociology*, p. 97. Amongst the most advanced nations the city trend is universal. Our modern populations are caught in the whirl of a civilization which rests on scientific and technological principles.

(3) Curtler: *Short History of English Agriculture*, pp. 64 and 209.

was vividly shown by the medical examination of men in the great war; but another, that is apt to be forgotten, has been the amalgamation of agricultural holdings into farms of such considerable size that a good tenant is able to earn an adequate income and maintain a reasonably high standard of living. This process of amalgamation was largely a result of the industrial revolution, which attracted labour to the growing towns and in consequence created a steady and increasing market for food(1). Thus the actual loss of population in itself may not be an affliction to the country. It may lead to enlarged farms and a widening of the scope of agriculture for those who remain(2). But the result may be baneful; there may be a decline in national physique or, if the necessary labour supply departs, even a decrease in the cultivated area(3). The most serious result, however, is the steady drain on the rural intelligence and more especially of potential rural leaders especially where the landlords move to the towns. Where the more educated, and the more enterprising of the country population are year by year drawn by the attractions of the town, and the less vigorous, less capable and less enterprising youths are left in the country, the quality of the rural population must inevitably deteriorate. The new science of agriculture demands high intelligence and a high standard of education: the whole future of the industry is bound up with the increasing application of scientific knowledge to old problems, so that for the prosperity of an agricultural country it is absolutely essential that the cultivators should be either themselves trained in scientific methods or should be closely guided by those possessed of the necessary qualifications. No industry can continue to prosper unless it is continually recruited by intelligence, and the interests of the whole State as well as of the cultivating class require that the new standard of knowledge and technical skill shall be freely forthcoming(4). The urban movement may be good if it

(1) Cf. Curtler: *Short History of English Agriculture*, p. 162.

(2) Cf. Gillette: *Constructive Rural Sociology*, p. 95.

(3) Cf. Carver, *Principles of Rural Economics*, p. 254:—In so far as the movement from the country to the city has the result of maintaining medium scale farming rather than small scale farming as the function of an agricultural proletariat, it is a wholly commendable movement—this is only the way by which a higher standard of rural living can be maintained.

(4) Cf. Carver: *Principles of Rural Economics*, p. 200.

Hall: *Agriculture after the War*, p. 49, cf. also Orwin: *Place of Agriculture in Industry*, and Mr. Freemantle's excellent pamphlet.

Mr. Rowntree considers that the reason why the Belgian cultivator can pay a higher rent than the English is that in England the more intelligent type of agricultural labourer is drawn to the towns, leaving the farmer with only the labour of second rate quality, while in Belgium the labour on the farm is done by the peasant himself who reaps the benefit of his exertions and so works with a greater will and with more intelligence. *Land and Labour: Lessons from Belgium*, p. 150.

withdraws to productive work in the towns the surplus unskilled labour or the struggling cultivator of an uneconomic holding; but it threatens the whole foundations of national prosperity when it results in the most important industry being left at the mercy of the least intelligent and the uneducated. The omission on the part of the educated to show any effective practical interest in agriculture or to take a prominent part in securing for this vital industry the attention which its paramount importance demands, is all the more remarkable as so many of them are country stock(1). In all the large towns of the Punjab, a high proportion of the people were born outside, sometimes over fifty per cent. The excess of births over deaths is sufficient to account for moderate expansion in population only. At one time (1901-1911) the death rate was higher than the birth rate but recently it has been less. The great expansion of the large towns is chiefly due to the movement from the villages.

The result may be best illustrated from the Census Tables for 1931, giving the population of the great towns in 1881 and 1931 :

		1881	1931
Amritsar	..	151,896	264,840
Ambala	..	56,463	86,592
Sialkot	..	45,762	100,973
Lahore	..	149,369	429,747
Multan	..	68,674	119,457
Jullundur	..	52,119	89,030
Ferozepore	..	39,570	64,634

This migration is recruited mainly from three classes, unskilled labour, sons of traders and educated youths. Few of the peasant proprietor class are included except those who having received education have sought non-agricultural callings and there is as yet no indication of an increase in the size of peasants' holdings being due to this cause.

The chief evil, as has already been indicated, is the steady persistent withdrawal from agriculture of the more intelligent and enterprising youths. These seem to be firmly imbued with the idea that the cultivation of the land offers no sufficient scope for their newly acquired education, that farm labour is unworthy of them and that a better career is to be found in some clerkship in a town and yet only a very small minority come to prominence

(1) In stating a fact, it must not be inferred that blame is being imputed. The educated townsmen can advance good reasons for his neglect—lack of opportunities, lack of any organisation or of leaders, preoccupation with his own troubles, the absence of facilities for the study of rural problems and so on. But the fact remains that the trained intelligence of the towns must be attracted to agricultural questions.

in the new sphere. It may be very largely true that agriculture as at present practised in the Punjab offers little scope for education and intelligence ; but that is just because education and intelligence have not been applied to the task of evolving a more scientific type that would not only afford full opportunity for the highest qualities of the cultivator but would return ample profit on his enterprise. To keep the educated young man in this industry, it must be shown that it is as profitable as other industries and that it offers as great opportunities for the individual of merit as does a town life(1). Unfortunately, even this will not be enough, for to a youth of any education, village life appears dull and void of attraction ; efforts are being made to remedy this by the provision of libraries and village playing grounds, but the glamour of government service and the lure of the town will continue to attract. To those who take a vital interest in their surroundings who like to produce and construct by their own hands and through their own effort, and who see in rural problems ample scope for their talents, the country will always prove attractive. But others who like things provided for them, who like to be amused by others, employed by others and kept occupied by others, the town will absorb. The slave spirit in mankind fills the cities. Perhaps the danger need not be stressed, for agriculture must for long remain the predominant industry of the province.

There can hardly be such a thing as a farming interest or a landed interest apart from the general interest of the community, since most people have some connection with the land and with agriculture(2). Under the new Constitution the ultimate political power will rest with the rural voter and those who desire his suffrage will have to satisfy him of their worth. For the ordinary political shibboleth agriculturists generally care very little, but they are usually shrewd enough on any question that has a practical bearing on their work. The new system of government may thus serve to stimulate amongst the educated a more living interest in problems of rural economics, and may even brighten the evening discussions with topics of immediate practical importance. The spread of the Co-operative Movement is another, and, perhaps, a still greater, factor in invigorating village life ; it is setting up new village institutions under democratic control, it aims at inducing the actual producers to take under their own management every stage in the work of production from the

(1) Cf. Carver : *Principles of Rural Economics*, p. 340, Lee Coulter: *Co-operation among Farmers*, pp. 10-11.

(2) *Rural Economy in the Bombay-Deccan*, p. 181.

In Denmark this consummation has already been achieved. "The debates of Parliament, the discussions in the press, the objectives in the schools, the concern, in fact, of all the people, is the well-being of the farmer." Howe : *Denmark*, p. 127.

purchase of necessary material to the sale of the final product ; it seeks to arouse their interest in the business side of their industry, and to ensure them the fullest returns from any new enterprise . By reducing the rate of interest it makes improvements profitable ; by cheapening necessities it makes a higher standard of living possible on the old expenditure ; by selling in the dearest market it affords the worker a vista of progress. Above all, it should, and to some extent does now, bring to the front those endowed with the capacity for leadership. Hitherto, the results have not attracted the attention they deserve, but the introduction into village life of well-educated and zealous young men, preaching a new doctrine of economic emancipation and economic progress, and bringing to the cultivators the knowledge derived from a wide study of other rural countries, cannot but have a widespread and far-reaching effect that, in time, even the most apathetic person will not be able to ignore. As has already been stated, the urban movement as far as it affects surplus rural labour may bring good to the province, though it entails an increase of crime, immorality and ill-health which seem to be inseparable from town life. The flow of the intelligent and the educated must be turned the other way, so that the vast potential wealth of the province may be exploited to the full. The provision of employment in the villages for the educated youths of the rural classes will not by itself stem the urban movement ; the countryside must be made socially attractive if it is to keep its more intelligent members and this in turn requires the production of greater wealth from the land to support the additional amenities at present found only in towns.

The area of land in the province available for the production of crops being limited, the necessity for putting this area to the best possible use should be obvious ; of labour there is ample supply ; of capital there seems to be no shortage for purposes that promise a profitable return ; there remains the knowledge as to how the labour and the capital can be combined for productive use and the intelligent guidance required to achieve the result desired. For the progressive improvement of the standard of agriculture as well as for the greater end of better living for the agriculturist, education is essential. Unfortunately, both here and in other countries the cultivators seem to place little value on the type of education offered ; there is widespread complaint as to the "unsuitability" of the ordinary school for those who are to make their living from the soil. Some ascribe this to historical development ; they point out that education was at one time a luxury for the richer class with leisure, that it grew to be the speciality of those who through the spoken or written word

no dearth of labour capital & intelligence but of direction & so Educ

sought to guide or control other people, either as the governing class or as politicians, lawyers or preachers, and that it later became the means whereby humbler men gained a livelihood as writers or clerks ; and that as a result the general type became adapted to the needs of such people as it still is to-day.

It is only in recent years that Colleges and Universities have recognised the need for special types of education for those destined for other careers, such as commerce and industry ; the Army and Navy still to-day have their highly specialised academies and hardly a generation ago the teaching of science was not highly regarded at the older Universities. It is a striking fact that England, the greatest sea-power in the world, will have nothing to do with secondary schools, Colleges or Universities for those who are to be officers in the Royal or Merchant Navy, but takes the boys from the elementary schools straight to special training centres. It is another striking fact that many businessmen when selecting recruits for their firms hesitate to employ graduates from the universities and prefer to enlist them at an early age and "put them through the mill," that is to say, give them a specialised training in their own offices and factories. The same complaint is made in India that Indian private employers will not recruit graduates from the local university with the result that the latter are forced to the alternative of government service or the law.

That the type of education open to youths is not regarded as suitable for particular vocations is not then confined to the agricultural field but the complaint comes from the latter with particular strength. It is urged in most countries that the education offered in villages has the effect not only of drawing the brighter boys to the towns but of giving the rest a distaste for agricultural work, and that these results strengthen the dislike which so many agriculturists feel for any form of education at all. The matter has attracted careful thought in most countries and certain general features are widely admitted. Many teachers in primary schools are town-bred with town horizons ; they have no interest in agriculture ; they can feel no real sympathy with the daily life of their pupils or their parents. They find the country dull ; they inspire their classes with a desire to share the attractions of urban life and they encourage the brighter amongst them to look forward to getting some post in a town. The view of an eminent Punjab educationist sums up one aspect of this problem : "The employment of agriculturists as village teachers has not received sufficient attention in the past. It is only those who are themselves agriculturists, born and bred in the villages,

who can enter into the thoughts and feelings of village people and understand their needs and difficulties" (1).

Another line of criticism has also now obtained wide acceptance, its accuracy being easily demonstrable: the text books, for reading, writing or arithmetic, are all based upon town life; the examples are taken from the towns and the world dealt with is completely strange to the village boy who either revolts from the task of understanding it or falls under the spell and becomes fascinated with the idea of the new life which education may open to him. An intelligent boy brought up in close contact with his father's work in the field acquires a large store of quite useful and interesting knowledge of his surroundings both animate and inanimate; he could probably easily defeat his teacher on many points, but, to his surprise and confusion, his teacher expects him to know all about trains and shops and people who insist, to his annoyance, on buying as many yards of silk cloth as it costs in annas per yard. To such a youth, education is a foreign thing; an import from beyond; a strange ritual in a strange language about things that have no existence within the orbit of his existence. It is hardly a matter for surprise that both boy and parent conclude that such learning is of no use to farmers, that in their business it has no cash value and that the expenditure on books, slates, pencils, etc., considerable even under a system of free education, is not likely to be recouped from higher yields from cow or field.

In some countries it has been sought to get over the difficulties in two ways: by appointing representatives of local agriculturists on the committees of schools so that their views may receive the fullest consideration, and by the farmers organising their own associations and societies to found and manage schools of their own design. But where, as fortunately now in the Punjab, the official Department is itself as anxious as any one else to devise and spread a scheme that will attract and retain the rural pupil on its own merits as a thoroughly valuable form of training, the need for schools owned and managed by private associations of agriculturists is not necessary. Since the first edition of this book appeared in 1922, great efforts have been made to meet all criticisms and it is difficult to write anything but praise about the new system.

In the curriculum itself little change has been found necessary except for the framing of the text-books in terms of

(1) Not, of course, to this province only but to every country in the world. Lack of research and lack of education in agriculture as a science among the rank and file of agriculturists are included in the causes militating against the proper development of agriculture in Great Britain. (*Cf. Evidence given before the Royal Commission on Agriculture in England, 1919.*)

the everyday life of the village in order that the pupil may find himself learning about his own surroundings.

In the primary school there can be no attempt to teach agriculture or any technical subject, but every effort is now being made to imbue the pupil with a lively interest in the world around him. It is now recognised that the first object is to awaken the desire for education and to get the pupil curious to know more. Unfortunately an eminent Indian educationist seems to be correct when he points out that most educated Indians take little interest in nature as such, in the butterflies and birds, the trees and shrubs, and the whole world of teeming animal and plant life around them. The Indian edited press seems to have nothing comparable to the Nature Jottings or to the special gardening or farming articles or to the letters from ardent naturalists which are such a common feature of almost all western journals. The result is that upon the village teacher has to be thrown much of the responsibility for imparting instruction on matters which in other countries are imbibed through the general conversation of the home. If he is to perform this duty with any success he must himself be keenly interested in what he has to teach. Before him lies a rich field of service and of influence; it is open to him if he be in sympathy with and in contact with village conditions and requirements. The root of rural progress and well-being is a well-devised system of rural education, but to organise and supervise the developments of that system there must be teachers carefully selected and as carefully trained. The Punjab Department of Public Instruction, whose considered opinion is here followed, found that the personality of the teacher was of vital importance; if he were to be the village leader he must be qualified. The American Presbyterian Mission at Moga led the way and the official department followed and improved at Ghakkar. Those under training for the schools are encouraged to enter into all the healthy activities of village life during their course, they live in intimate contact with all the problems of the people and share in the works of improvement being carried out in their neighbourhood. It is hoped that by this training the teachers will be accepted as leaders not from their official position but through their active sympathy with, and knowledge of, the hopes, the troubles, the successes and the failures of the people with whom they live. With such teachers it is hoped that the villagers will realise that while the capacity to read and write and work out sums may be of little direct use in their daily tasks the course of mental training required before such capacity can be obtained will prove of real value. Literacy, of course, is essential as the door to so much else, but it is not to be acquired

through the medium of the pupils' own life and experience so that it becomes a part of that life and experience.

Since the first edition of this book appeared in 1922, the Royal Commission on Agriculture has reported on this subject of agricultural education after hearing evidence from every province. The Punjab system met with its approval and there is not likely to be a more weighty verdict for some years. The Commission agreed with the general criticism on the problem. It pointed out that the agriculturist lives a simple life in comparative isolation from towns and town amenities, and that agriculture differs from other industries in that it is not merely an occupation of the working hours but a mode of life for the whole waking day. The whole social and domestic outlook of the workers is bound up with the requirements of their calling and no farmer can say that his work is done and that he has nothing more to do till the morrow. In no other industry has the individual such a personal touch with nature; in none is he in closer co-operation with natural forces: in few is he more of a prime producer or even a creator. There may be others which reflect more closely the mind and brain of the worker, but there are few in which an intelligent understanding of natural phenomena is more promptly recompensed.

There need be no hesitation in accepting the Commission's dictum that without a satisfactory all-round advance in primary education there can be little hope of any widespread economic progress. There seems to be general agreement in this and other countries that the agriculturist is capable of learning; it is understandable that a man so closely in touch with nature should expect that education should deal with the nature he knows and should bring to him a better understanding of the mysterious forces at work around him. This has been accepted and nature study, rural science, school gardens and plots and elementary training in agriculture are now amongst the recognised requirements of the education of an agriculturist.

Other countries have found that for a steady improvement in rural life the instruction given during the school-going age must be supplemented by more advanced classes for adults. Denmark is an outstanding example of a country achieving progress through the voluntary effort of peasants working through People's High Schools. In England the difficulty of improving the standard of farming until the general standard of education of the farmer is first raised has led to attempts being made to institute evening classes; of these, the objects are not so much to give instruction in scientific farming as to develop and encourage the desire for learning amongst village people. Almost any subject will do if the teacher be possessed of the gift of imparting knowledge and

of stimulating the desire for more. Most men and women, if their intelligence be wakened and their interest be aroused, will seek to widen their minds with study. Experience seems to show that adult education should not primarily be concerned with imparting of technical knowledge; the desire for that will come as a result of improving the general standard of education. There is little done in other countries towards improving the instruction of village people which is not known and fully understood by the officers of the Punjab Education Department(1). The future alone will reveal to what extent they succeed in selecting, training and sending out the right type of teacher and, further, to what extent the people will respond to the great opportunities now being offered to them.

In the above pages, no special mention has been made of female education because the argument clearly applies to both men and women; but it may be of value to repeat here an extract from the evidence tendered by Mr. Grantham, I.C.S., of Burma to the Royal Commission on Agriculture: "Above all it is necessary to recognise the supreme importance of education for girls and women. Money spent on educating boys and men in advance of their wives and sisters must be largely wasted, and the education of the general body of children cannot be carried successfully far beyond that of the average mother. It is of no use teaching children at school if mother is out of sympathy. It is of no use explaining co-operation to men, if their wives do not co-operate with them in forming and working societies or at any rate give moral support. The co-operative lecturer may rouse enthusiasm at a men's meeting; but it will all evaporate when the men tell the story at home and are called fools or are silently regarded as babblers. The greater effort should be made with the girls, because this would eventually give the greater result."

The Royal Commission on Agriculture stressed the great importance to rural development of the spread of literacy among the women of India; everywhere the cultivator's wife shares his daily tasks in greater or less degree and it is she who is able to reflect in the comfort of the home any increased income arising from improvements in cultivation. In England and other European countries the farmer's wife plays an important part in adding to the farm income through the dairy, poultry and other secondary industries and there should be little hesitation in accepting the anticipation that the education of village women

(1) It is one of the curious features of life that those who labour the hardest for the greatest number of people receive little acknowledgment though their work remains as a lasting monument to their worth. Those who devote themselves to the rich and influential are honoured freely and usually far beyond any merits they may possess.

will result in great improvement in social and economic conditions.

In the foregoing pages the need for wider general education and for a higher standard of intelligence has been stressed as a preliminary to better farming; it remains to touch briefly upon the subject of technical education.

When a young man undergoes a course of study to qualify as a doctor or a dentist he is not expected to make a living by doctoring himself or mending his own teeth, but by giving advice and assistance to others on the subjects of which he has made a special study. The object of an Agricultural College is somewhat similar; it equips men to advise others in their troubles; its students should not be expected to return to the family holding unless that holding be sufficiently large to afford full scope for the training acquired. The cultivator, unfortunately for himself, is confronted with all sorts of difficulties arising from soil, climate, pests, plant and animal diseases, unsuitable seed and so on, and requires help and advice as to how best to ensure a return from all his labour when so much in nature seems bent on robbing him of his reward. It is such advice and help which a University course in agriculture is designed to give, and the intelligent cultivator will avail himself of it just as he seeks veterinary aid or medical aid or dental aid as the need arises. In America, students who have passed a College course embark upon agriculture, but in most other countries the College turns out technical advisers rather than practical farmers. For the latter something less than a full degree course is provided in the Punjab, but there is still lacking the opportunities for training youths which are provided in England by expert farmers on their own land who take apprentices at a fee and give an intensely practical training with just enough scientific explanation to help the apprentice to understand the why and wherefore of what he is told to do. The cultivator's son has ample opportunity of studying village methods from an early age and what he wants is training in methods not yet practised in his village; this is provided through the medium of demonstration plots or farms and it is unfortunate that so much misunderstanding has grown up around them. There is an idea that such a plot or farm should pay its way, whereas it may be designed to exhibit a number of different ideas, all of which have to be carried out on a scale too small to admit of a return, or it may be designed to show a combination of different seeds, ploughings, manures, etc., so that the visitor may himself see which is the best, and for this purpose it is often necessary to cultivate for a failure. It is then only from a misunderstanding that such plots or farms are expected to pay; if it be desired that there should be an exhibition of a paying farm then a great many intricate factors would have to be taken into

account, and the mere fact that England has not yet instituted a farm designed to show the most profitable method of utilising a given area should suggest that the Punjab is not backward in not embarking on the experiment.

Before leaving the subject of education, something must be said of the need for the development of those other faculties, beside mental alertness, that count for efficiency. It is unnecessary to dwell here on the great economic value of good health and physical fitness; and present knowledge does not, perhaps, enable a reliable estimate to be given of the extent to which the disinclination to prolonged hard work is to be ascribed to the prevalence of disease. But it is of little use imparting to cultivators the knowledge how to improve their economic position if they are unwilling or unable to put forth the extra exertion required in the use of it. Apart from these considerations, however, there are two others that strike the European observer. One is the low standard of manual dexterity shown by the ordinary cultivator and the other is his limited control over the animals he uses. The first may be in some measure due to the existence of village artisans paid by a customary share of the produce. In such circumstances the cultivator saves nothing but time by doing his own repairs and so has not developed much skill in the use of his fingers. The result is seen when any new implement is put into his hands and explains in some degree his disinclination to use these. If solid progress is to be made, considerable improvement must be effected in manual dexterity and in the cultivator's knowledge of the animals he uses and of his control over them.

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In the foregoing pages some attempt has been made to discuss that element in the production of wealth that is commonly referred to as enterprise. The province possesses ample land, labour and capital but, beyond these, there is required something else to bring them together in the right proportions and to make such use of them as will result in the highest possible production of wealth. It has been shown that the cultivator is inclined to regard his holding as a source from which his own household needs may be met and the revenue paid. He seldom sets himself to extract from it the maximum yield which every hour of labour and every rupee of capital he can put in would give. This attitude, is, in some measure, accounted for by the drain to the town of the more intelligent and educated, and in further measure by the belief that the present system of education is of no value to him in his avocation. It has also been pointed out that for any considerable improvement in material prosperity there must somehow be inculcated into the cultivator's mind the idea of progress towards a better standard of living and the firm belief

that progress to a better life is possible through his own exertions. The retrospective habit must be curbed; history is eminently useful to show how to profit by past mistakes, and how to advance to new successes, but tales of past glories or past grievances, real or mythical, are not only of no economic value, they do positive economic harm when they absorb time, intellect and energy that could be devoted to constructive work. It is the future that has to be faced and not the past; it is the future that attracts the self-reliant, the strong and the vigorous; the past exercises a strange fascination over the weak, the lazy and the decadent.

Assuming, however, that all these principles acquire general acceptance, there will still remain one important factor without which most human beings are but as a flock of sheep. This factor is leadership. In a rural community the conditions of life militate against the development of this peculiarly valuable faculty. The most serious effect of the shift of the intelligent, enterprising and educated from country to town is the loss of leadership sustained by the countryside(1) and the decline of agriculture in Great Britain has been ascribed in part to the loss of young men with trained intelligence(2). In many European countries the clergyman, the schoolmaster or the doctor have done what lay in their powers to stimulate the agriculturists to improve their position, and the clergy in particular have ardently supported the movement toward agricultural co-operation on account of its moral value. Unfortunately the religious organisations of the Indian communities do not offer to graduates the same opportunities of work and influence as fall to a clergyman in England. Assisted by the great landlords and the doctor he has wielded much influence in favour of rural education. If only priests and mullahs were University graduates, if only the bigger landlords were enthusiastic scientific agriculturists and if only the countryside supported doctors anxious to advise on the needs of crops as on the ailments of man the Punjab would have a bright future. But this influence(3) has not been available, and beyond all doubt much of the present-day poverty, and much of the backwardness of the people are due to the lack of good leaders, men capable of taking hold of the commonest problems, of working them out to a practical solution and of convincing the people by actual demonstration that they were worthy of trust.

(1) Cf. Gillette : *Constructive Rural Sociology*.

(2) Hall : *Agriculture after the War*, p. 49.

(3) Cf. Plunkett : *Rural Life Problems of the United States*, p. 163. Cf. also Balzac : *The Country Doctor*: "It is not without reason that people speak collectively of the priest, the lawyer and the Doctor as 'men of the black robe'—so the saying goes. The first heals the wounds of the soul, the second those of the purse, and the third those of the body. They represent the principal elements necessary to the existence of society—conscience, property and health."

To some extent, perhaps to a very large extent, present conditions may in turn be due to the absence of historical records. It is hardly possible that past generations have not contained men of unusual discernment or of a high constructive instinct, who grasped the pressing difficulties of the day and saw through them to a more advanced stage. But the conditions of life, the absence of any system of facile record, and the succession of invasions and political struggles prevented their wisdom from being accumulated, and passed on to the profit of others, and so succeeding generations have lost the advantage that would have been open to them if the writings, teachings and opinions of former leaders had been preserved. It further appears to be true that the invaders brought with them little knowledge of agricultural methods in advance of those they found(1). "During the greater part of the life of the world," writes Professor Marshall, "most of the people have spent nearly the whole of their time in the fields: compact centres of life and thought were rare, and, before the days of printing, a scattered population had little opportunity for the stimulus and suggestion, which one man can derive from the thoughts and experiences of another. Tradition ruled; and particular experiences seldom developed into successive steps of cumulative progress. These facts go far to account for the slow progress of technique until recent times. It may be true that the native brain power of the individual has not greatly increased with the ages; and it is certainly true that emergency and opportunity have frequently proved agricultural populations to be strong in resource as well as in resolution. But yet the conditions of agricultural life have not been such as to bring to the front those men who had the faculty requisite for making great occasions for themselves; one reason for this being that the ownership of land has come by inheritance in a somewhat greater degree than the ownership of considerable industrial resources. Further, every agricultural problem has peculiarities of its own; and some sides of it can be mastered by shrewd, experienced, alert, instinctive judgment, better than by systematic reasoning based on ordered knowledge. Therefore, the agriculturist has never been apt to search for the general in the particular, and the particular in the general. His instinct and insight have for the greater part died with him. The progress of his art remained for the greater part empirical until men trained in industry, or commerce, or in

(1) The invasions probably served to prevent the accumulation of records, but they resulted in little more than a change of ruler. According to the *Cambridge History of India*, Vol. I, p. 53: "The lives of the common people, their social conditions and systems of local government, were barely affected by such conquests. Indian institutions have therefore a long unbroken history which makes their study especially valuable."

scientific schools, came to his aid.”(1) In the history of English agriculture which is unusually rich in original detail very few names stand out as leaders in, say, the last 600 years. Of America it is said that the leadership of the rural regions is undeveloped or is largely lacking as compared with what could be expected of such a populous and wealthy portion of the nation(2); and in general it has been found that the leaders of rural movements have not themselves been agriculturists. In industry it was a valuable faculty in the good employer that he could recognize among his workers those who possessed the judgment and resource that would enable them to bear greater responsibilities with credit. In agriculture there has ordinarily been no one amidst the small individual workers to select him who possesses the faculty of leadership and to set him in a place of authority. And yet the country requires leaders of constructive ability, it requires them to organize rural communities on business lines, it requires them to show a way out of present difficulties and to construct for them the stairway to a higher plane of prosperity. The leader must be possessed of a solid foundation of agricultural knowledge; the big landowners will never become leaders of their tenants and be able to develop their estates except by hard work in and unremitting industry to the cause of agriculture. The fairest and most perfect plan will fail unless leaders of the right type are forthcoming. Were the Punjab townsmen less pre-occupied with other matters than agriculture and more soundly educated in rural affairs, their sharper intelligence and more developed capacities would incline to gain for them the vacant post, but until there is what may be called an educated laity in rural economics the leaders must be searched for amidst the villagers who understand rural conditions and rural communities. In this, again, the best hope rests in the Co-operative movement, which in the Punjab as elsewhere, brings to the front a new type of local leader, not the best talker, but the man whose knowledge enables him to make some solid contribution to the welfare of the community(3). The scope is immense, but it will require time for the man of unusual discernment and capacity to discover himself and to be discovered by others. Already there are several enjoying the confidence of their fellows over a wide area who

(1) *Industry and Trade*, pp. 199, 200. The reference, of course, is to agriculture in general and not to India in particular.

(2) Gillette: *Constructive Rural Sociology*, p. 106.

(3) *Rural Life Problems of the United States*, p. 123. History shows that rural leaders need not be drawn from expert cultivators. Arthur Young was not a successful farmer; Raiffeisen was not a farmer at all. True, some of the biggest names in English agricultural history are those of landowners, but the exceptions should encourage men of original genius, even if they possess no land.

can take the lead in the simpler matters of organization, but there is as yet little indication of a sufficient number coming forth fully equipped with the requisite technical knowledge as well as with the supreme gift; and until the province can produce more such men, progress must largely depend on the activities of the trained official(1).

There is not, in this, any ground for pessimism. The tendency to concentrate thought on matters of a religious or spiritual nature may serve to explain the fact that India has produced few leaders in the economic sphere; her people have only recently devoted themselves to the accumulation of wealth, and few have yet grown into giants of productive enterprise. Scientific agriculture was introduced into this province a comparatively few years ago, and already it has several achievements of considerable value to its credit. A new generation is springing up to whom modern methods will appear less strange. Undoubtedly, education is gaining in popularity, and may soon come to be recognized as a thing worth spending money on. From the interaction of Science, Education and Co-operation, there may reasonably be expected to emerge leaders fully equipped with all the necessary qualifications. The present dependence upon official action and stimulus may rightly be regarded as a phase of progress. There are indications that the new leaders may meet with disappointment from a tendency to too much diffusion of energy. Concentration is essential to economic progress. But concentration is hostile to evanescent popularity. What the province requires are men who will work at their own doors; men who will strengthen their arguments by the demonstration of accomplished fact; and who will therefore concentrate on the accomplishment before they embark on the argument. Success breeds imitation. The real leader must know in what success consists if he is to lead along the difficult road of constructive economic progress. Recent years have seen the rise of several men, great in their sphere—though humble in their origin, who have achieved wonders amongst their fellow villagers and, unless the new Constitution proves too crushing a burden, there should be many to follow them in the work of leading the province to better living.

(1) The late Sir Ganga Ram was an excellent example of an enterprising leader. Though not of an agricultural class, his enthusiasm for agricultural improvement was immense. If every tehsil in the province produced a Ganga Ram, progress would be widespread and rapid.

CHAPTER IV.

WHY DOES THE CULTIVATOR CULTIVATE ?

The uses to which the land should be put—views of the politicians—and the townsmen—conflict of interests—the manufacturer's view—the claim of the cultivator to seek his own profit—without any deviation in favour of the town—which is a market only—How can the cultivator get the highest profit?—limits imposed by lack of markets—by the size of his holding—by the law of diminishing returns—his difficulties lessened by accumulated experience—The National interest—an emergency may override the cultivator's aim—the claim of industry to override the cultivator in India and England—Summary.

The question "why does the cultivator cultivate?" may appear at first hearing one of those flippant riddles with a catch in the answer or with no answer at all beyond a further puzzle. It is, however, put seriously. It is, and it is intended to be, a reference to one of the most important problems which every country has to decide. For agriculture is still the largest and most important single industry, not only in the world, but in nearly every country in the world. Even in England, Scotland and Wales, factory industries are confined to well-defined areas and the greater part of the country is given up almost wholly to this calling. Three-fourths of Ireland are for the most part dependent upon this one source of wealth. France possesses industries in the north-west, elsewhere she is dependent upon her soil for her annual income. South-west of Paris there are to be found only such industries as are themselves dependent upon the produce of the well-tilled fields. In Germany there are industries where there are to be found iron, coal, or some other special local advantage. Throughout the greater part of that empire agriculture is the chief means of livelihood. It would be easy to continue the recital in connection with other countries; all have the same tale to tell; America has one State, New York, with large-scale industries; for the rest it may be said that there is no State whose industrial output exceeds that of one single big town. Japan looms large these days in the minds of Indians; the chief industry of that miserably impoverished country is agriculture; next in order is sericulture; the factory industries supply, or attempt to supply, foreign demand for cheap goods;

they do not rely on the home market. It is one of the peculiar results of the modern system of education that it encourages the concentration of attention upon manufacturing industries and ignores the chief, the oldest and the most vital industry of all. It may be freely admitted that economists are guilty of participating in this offence, for nearly all accentuate the problems of the commercial and factory system, and neglect those that await solution from the silent tiller of the soil. Although the land is everywhere and by everybody acknowledged to be the chief source of new national wealth, there is an almost universal disposition to neglect the simplest questions that its use gives rise to. Take one. "What is the land for?" What should be done with the land in this country? What is its part in the life of the nation? The question sounds simple enough; but the answer is difficult to discover. If current literature be studied, there will be detected a number of theories, never quite openly expressed but always present in the minds of the writers, that somehow do not clear up the real problems.

An opinion, commonly held here and elsewhere, is that the land exists to provide food for the towns, that it is the duty of the cultivator to supply ghi, milk, and wheat, all at cheap rates, to those who form the urban population(1). There is not recognised any reciprocal liability on the part of the townsman to buy from the cultivator, if, say, wheat from Australia or cotton from the Sudan, Egypt or America are cheaper.

This idea that the urban population has a claim on the cultivator is very strong in England, but fortunately it is becoming recognised there that if the farmer is to produce wheat or anything else for any object except his own profit then he is entitled to something in the way of a bounty. A witness before the Fiscal Commission said the people had a right to wheat at 16 seers for the rupee; he was an industrialist who wanted cheap food for his labour. There are others who object to wheat being exported from the province as they consider such export keeps the price up. Another idea is that the land is put there to produce the material for trade and commerce, and, accordingly, if any of this material can be used for industries, it should be sold at a cheap rate to factory owners. Those who hope to start mills for making cloth are agitating for an export duty on raw cotton, so that it will become cheaper even although the cultivator suffers; they have secured the imposition of a protective duty on imported cloth, so that they will be able to sell their cloth at

(1) Cf. MacGarr: *The Rural Community*, p. 3. "Many of the laws enacted to promote agriculture have sprung largely from the urban need of more supplies, and have aimed at increased production, rather than at better distribution of farm products, or the securing of higher prices for the farmers."

a dear rate, although they do not hesitate to use imported raw cotton instead of that grown in abundance within India if that suits their pockets better. The view that agriculture should be subordinated to the needs of industrial development is clearly expressed by Professor Brij Narain: "The principle may be laid down that the development of agriculture must proceed in relation to that of manufacturing industries, for the aim of Indian agriculture must be to provide a basis on which the industrial system of India, and India alone, might be built up"(1). This, of course, would mean a cessation of all agricultural progress until industries had sprung up to absorb the product; jute would cease to be grown in Bengal, oil-seeds and much of the cotton in the Punjab, and so on. It would subordinate the greatest industry of the country to some of the smallest; and would seek to set up a new doctrine, that the prime producer should grow not for the market but for certain purchasers only dealing in the market. It does not carry with it any obligation on millowners to use only Indian material.

The confusion of ideas about land is considerable among political parties in England; some would divide it into small holdings (i.e., areas under fifty acres) in order to check the increasing migration to the towns; some would divide it into small proprietary holdings so as to break up the power of the great landlords; some would do the same in order to create a body of men who would resist all revolutionary change; socialists would divide the land amongst "the people" without quite understanding what the inexperienced people would do with it; the labour party advocate its partition amongst the unemployed in order to give them work to do; conservatives seem to think that such division would create a body of conservative voters. Curiously enough there are people who insist upon a limitation of hours in the factory and yet advocate allotments of one to five acres for working men on which they are to work in their spare time. The experienced farmer listens in bewilderment to proposals to place men on small holdings when he knows only too well the difficulty in England of making a living on 125 acres; considering what knowledge, experience and skill are required for successful cultivation, all proposals to throw urban labour on to a few fields must strike thinking men with surprise. The history of the small holding movement in Britain shows the folly of expecting untrained and inexperienced men without capital to make a living out of a few acres in a country so heavily handicapped by enormous imports of food as England. A more cautious view is expressed by Professor Dampier-Whetham.

(1) *Indian Economic Life*, p. 373.

There is more to be said for artificially supporting agriculture than any other industry. Natural uncertainties are greater and stability of price more necessary, depression is more disastrous socially, since it leads to depopulation of the country-side. It is important to find a career at home for those of our people whose special aptitudes are suited to an open-air life. A contented and prosperous peasantry is a sound and wholesome element in the population. There is additional security in time of war(1).

This idea, that the land is a breeding ground for a fine race of men, who are to go and do whatever fighting may be necessary ; while the weaker townsman can stay at home and make large profits from his business dominated Germany's agrarian policy for many years. There is a sound basis for this idea. Somewhere or other, there must be a supply of men of good physique who can be drawn upon in time of need, and work on the soil tends to produce such men. A government for this reason must keep a watchful eye on the progress of agriculture and must always be prepared to undertake measures to secure a happy and prosperous body of cultivators. If there be any danger of such a decline as would lead many to abandon the land for the towns, agriculture cannot be left entirely to the play of economic forces. Connected with this is the idea that the land must be well peopled in order that there may be a sufficient supply of men and women to maintain the towns. The town-born population tends to decline. The birth-rate is lower and the death-rate higher than in the country ; so that if there were no migration from village to city the latter would run a risk of becoming depopulated. Those who are pressing for the encouragement of industries regard the villages as the source of labour (2). The land must produce children, feed them, bring them up pay for their education and then make a free gift of them to the factories. To a considerable extent this actually happens in some countries. Writers eloquently plead that " the greatest asset to the nation is men, healthy men and healthy homes. Where better can they be grown and found than in the country-side ? Surely it is a question that deeply concerns the nation ? " But although many will admit this, few will agree to any special favour being shown to rural areas. The Punjab towns would dwindle were it not for the extensive migration from the villages but there is no feeling in the towns that rural health should be improved in order to enable the migration to continue. In the British Isles the farmers

(1) *Politics and the Land*, p. 26.

(2) It has been said that industrial employment devours its children in, on the average, three generations. Cf. also the exploitation of girl labour in Japan. Fiscal Commission Report; para. 45. " The general complaint of Indian industrialists is of a labour supply barely sufficient for their needs, while a surplus population still remains on the land."

complain against the education rate because they say they pay for the education of those who drift to the towns, so that the towns get their labour educated at the expense of the country. Thus, there is a variety of purposes to which some one or other thinks the land ought to be put; and if they are examined it will be seen that they all hinge on the idea that the land exists for the good of the towns; it must supply labour when the towns require it and absorb labour when the towns cannot employ it; it must produce fighting men when the country is in danger and take back the cripples when the danger is past; it must produce food when imported food is dear, and must accept loss when imported food is cheap. It must supply the commodities required in commerce and the raw material needed in manufactures, but if imported raw material is found to be cheaper than the home-grown variety, then the land must not demand protection against the rival article. In short, the land has many duties to the State, but no right to consideration when the townsman prefers to neglect it.

From these various ideas, it becomes clear that there are many interests which to some extent conflict. The manufacturer wants his raw material cheap, the cultivator wants the highest price he can secure for his produce; the trader and merchant want the biggest volume of trade and commerce, and therefore the highest outturn; the cultivator must look less to outturn than to profits; the townspeople want food sufficient for their needs; the cultivator may find that food crops pay him less than some other crops, such as oilseeds or cotton. The industrialist naturally enough desires the rural people to purchase and use the articles he manufactures as they represent his biggest potential market, the rural people want the best value for their money. It is this conflict of interest which is referred to in the cry of town versus country; it is as old as towns are. As soon as a portion of the population in any country took to trade, to distribution, to marketing, or to manufacture, and collected in towns, there very soon arose this conflict of interests. This is easy to understand. But what is not so easy to understand is why the townsman expects the cultivator to be influenced by considerations different from those that guide the activities of other workers. In this country, for some unknown reason, agriculture is not even regarded as an industry. There is a cry for industries, but when it is pointed out that there already exists the oldest, the most important and the largest industry in the world and that it works in co-operation with numerous small scale industries more or less subsidiary to it, there is almost a sneer at the thought that agriculture can be regarded as quite a respectable calling, or that its subsidiary industries are worth a townsman's thought. In the towns, it is almost universally considered that no intelligence

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is required for the cultivation of the land ; that it offers no scope for the educated ; that it is good enough for the illiterate and for the unskilled labourer but is quite impossible for the young man from college. This idea is not found in this province only, but is to be found in almost every country. American writers in particular are insistent in calling attention to it ; British authors deplore it ; and elsewhere, those who have given thought to the immense possibilities opened out to the highly trained scientific man by modern discoveries unite in denouncing this view of agriculture as something good enough for serfs and clodhoppers, but quite out of the question as a career for young men with a good education. The greatest tragedy of all is that the same opinions are held by landowners and their educated sons. Indeed, education is regarded by many as opening opportunity to escape from the ancestral occupation of agriculture rather than as an equipment for making a success at it. Now when it is remembered that agriculture is, and must remain the main source of new wealth in this province, that there is even now more scope for increasing wealth in this line than in any industry that has ever been suggested, this attitude becomes important, and it is necessary to probe the matter with a view to arrive at a better understanding of the real facts.

There are several reasons for this attitude: the cultivator himself does not realize that he must bring to his task more brain, more intelligence and more education ; he, too, thinks that the educated son should go to the town as there is no scope for his education in the tilling of the soil ; and the most important questions relating to agriculture are neglected by the people who would benefit most from a proper understanding of them. A manufacturer of cloth, or ships, or of railway material, or of almost any other article, makes his goods in accordance with the orders he receives. A man does not make a ship in the hope that a purchaser will come along and buy it. A man does not make railway engines in the hope that someone or other will want them, and even in the manufacturing of cloth orders in advance determine the purchase of cotton, and the enlistment of labour. In these cases the prices for the ships, the engines and the cloth are settled when the order is given and before the work of manufacture is started. The cultivator, however, works to a time-table fixed by nature. It is no use to him that a demand arises for wheat after the time for sowing has passed away. He cannot put his fields on half-time ; he cannot wait to sow until a purchaser is found nor can he sow particular crops for known prices. He must sow what he feels confident he can sell, that is to say, he must adapt himself to a general demand. But, owing to the peculiar conditions of his industry, the price he will get

Difference between Cultivation &

depends on the total supply in the market; it is too late for him to vary the supply to the demand and the price at harvest time (1). It seems to be this difference between the manufacturer and the cultivator that leads the townsman to entertain the belief that the cultivator will go on growing wheat or cotton, whether the price of these is artificially brought low or not. He does not know why the cultivator cultivates; he assumes that he will just go on cultivating no matter what is done against his interests in the way of interference with his right to sell his produce to the highest bidder. The townsman does not understand Rural Economics.

But the townsman is not altogether to blame for his omission to make himself acquainted with the proper answer to the question "Why does the cultivator cultivate?" the cultivator himself is not quite certain; he would find difficulty in explaining the reasons for his own actions. The fact is that agriculture in this province has still not been placed upon a proper economic basis; and there is not at present any opportunity afforded either to practical cultivators or to students to learn how to put it on to this basis. To explain what is meant, the question "Why does the cultivator cultivate?" may be put in another way; let it be assumed that there is a young man starting life with capital for which he seeks some suitable investment; he may prefer something in the industrial line, but finds that there are at present not the knowledge, the skill, and the organisation which are necessary if risk of loss is to be avoided. He next considers the prospects of agriculture, and finds that he is confronted with some difficult questions. Should he invest his capital in the purchase of land, and try to cultivate as best he can without any further expenditure? Or should he invest only a portion in purchase and keep some for current needs? If so, then how much should he invest in the one and how much keep for the other? (2) Or should he take a lease of land and utilise all his

(1) But for long periods of changed prices the agricultural industry will tend to adapt itself to new conditions in precisely the same way as any other industry. Cf. the efforts of the cotton planters of America to stabilise their profits from cotton by limiting the outturn to regular trade demands; similarly with rubber, indigo, and some other special products. Cf. also C. Dampier-Whetham: *Politics and the Land*: "When a factory does not pay, it can work short time or be closed down till trade improves. A farm cannot close down; its operations have to be planned years ahead, and the land, if not kept in order, will become ruined by weeds, gorse, or thorn scrub. All that a farmer can do in bad times is to cut down expenses while keeping his land in good heart, in the hope of better days."

(2) In England in the fourteenth century, the stock of a well-cultivated estate was on an average three times the value of the soil. (Thorold Rogers, Vol. 1.) It is possible that in the Punjab under Sikh rule the stock was more valuable than the land. In some parts of the western districts this is still the case.

capital on agricultural operations? Should he buy a small plot and put all his remaining capital into the intensive cultivation of it? Or should he buy as much as he can and try his luck with extensive cultivation? Should he search for the most fertile plot he can find, in the hope of extracting therefrom an easy livelihood? Or should he bear in mind Thorold Rogers' dictum that "The real fertility of the land is the progressive skill of the husbandman. The richest soil may be exhausted by overcroppingthe poorest, if it be capable of improvement, may be made a garden by judicious treatment." If he adopts this, he may decide to buy land capable of improvement and to devote every ounce of energy, every anna of capital and every bit of brain and intelligence he possesses to its exploitation. If this young man, anxious to embark upon a career, elects to look around him before coming to a final decision, he will find many things that need explanation. Here is a man with 25 acres, why does he cultivate only half and let the remainder on rent? Does he get more from the rent than he would by cultivating it himself? On the portion he cultivates, he expends little capital, why does he not concentrate upon a small portion and cultivate a few fields well and let the rest on rent? Instead of ploughing two fields eight times each, why does he not plough one sixteen times? If this imaginary young man is given much to thought he will soon find so many questions that demand some sort of answer that his life could be spent in investigating them. In short, a young man with capital, about to embark upon a career in agriculture, must know something of rural economics or he will pay for his ignorance.

But throughout the Punjab the problem generally assumes a different shape. A young man finds that he has inherited a little land and some potential capital in the form of jewels; and the question arises: should he cultivate that land or should he let it on rent and seek a livelihood in the town? Should he sell those jewels and spend the money on the land or bury it for safety? If he decides to stay on his ancestral holding, he is confronted with still more problems. His father cultivated wheat. Should he cultivate wheat? Why did his father grow wheat? Should he resolutely plod along the same way or try to strike out a new line? He sees one neighbour with fifteen acres growing wheat; he is told that as the land depends upon the rainfall, wheat is the best crop to grow as it has deep roots and so resists drought well. A short distance away, another man with only four acres and a well is also growing wheat. He explains that as he has a well, wheat is the best crop to grow. In another direction is a canal, and there also the cultivators are growing wheat; they explain that, as the land is canal-irrigated, wheat is

the best crop to grow. Should he grow wheat also or try some other crop? Can the same crop be best for *barani*, *chahi*, *nahri* lands? What is meant by the *best* crop? The biggest yielder, the most profitable, the best seller, or the easiest to produce? Some writers assert that wheat does not afford much scope for the scientific farmer, that it does not respond so well to scientific treatment as other crops, so that while it is good enough for the lazy and the ignorant, it should be avoided by men of education, skill and capital. There are some who would like to see wheat disappear from canal-irrigated lands, and be replaced by crops which would pay a higher water-rate. There are some who believe that to grow wheat on land irrigated by wells under the control of the cultivator ought to be regarded as a crime against the spirit of progress. Why does the cultivator grow wheat?

These are not idle questions; correct answers are vital to the progress of this province. It is not sufficient that a cultivator should possess a thorough knowledge of technical and scientific matters relating to his land and his crops; production is not the end but the means; it is only a part, a very important part, but still only a part, of what a cultivator ought to know. The answer to the question "Why does the cultivator cultivate?" is not "to produce crops," but "to make a living" and as he wants to go on living he cannot afford to eat up his capital, and so must live on the profits of his labour, his land, his capital and of the intelligence and experience which he uses to combine these in the manner most suitable to his circumstances (1). The cultivator cultivates to make profits, and the sensible cultivator cultivates in order to get the highest profits he can. He is not a philanthropist who loves to work that the town may be fed; nor is he a slave who is compelled to work in order that the town may be fed. In fact, the feeding of the town is not the object of his labours at all; the town is a market for his produce, it is a market from which he seeks to derive his profits. Its demands largely determine his operations, the crops he grows and the proportion in which he grows them. He depends on the town for consumers who will buy his produce and the town consumers depend upon farmers for their food and other needs; there is a position of mutual economic dependence but neither party is subservient to the other. If there is any subservience at all in the relationship it is of the townsman to the cultivator, for the diet of a people has in the past been determined by local production, and, in spite of the great variety of foodstuffs brought from distant places, the old customary diet tends to persist. Cultivators

(1) It is a mistake to say that the cultivator lives on the produce of his land; he lives on the surplus after costs of production have been met.

Cf. O'Brien: *Agricultural Economics*, p. 29.

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may try to alter their production to meet changes in diet if this promises to be profitable, but this is because the general diet determines his market and so creates an expectation of profit. In agriculture as in every other industry, the aim of all effort is profit.

Cultivators, then, cultivate in order to satisfy their wants. Man is continually wanting something, and so is continually seeking satisfaction for his wants. The wants vary with the man, and with the conditions under which he lives. It is his wants and his circumstances which determine his work. It is a very important characteristic of man that he is disinclined to work any more than is necessary to satisfy his wants. If his wants are few, and are easily satisfied, he does little work; as his wants increase, he has to work harder. In other words, the standard of living at which he aims is an important factor in determining the amount of work he is prepared to do.

This general statement requires some modification in this province. Almost all the cultivators have inherited the land which they cultivate; they did not deliberately choose agriculture as the way to earn their living. The result is that many cultivate because they do not know any other way of getting a living; they are forced by circumstances to work on the land. In other words, to some extent, agriculture is a sweated industry; it yields a bare livelihood to many, who only continue on the land because they do not know what else to do. They get food, and some clothing and practically nothing else; they seem unable to improve their condition.

Apart from these, there are a large number of others who seek a little more than food and clothing; and a careful examination of their activities will show how wants determine the amount of work they are prepared to do. One who owns 50 acres of irrigated land could secure quite a good living from it, but he rents half of it to someone else. Why does he do that? Why does he not cultivate the lot? Because although he may want more things than he has got, he does not want them quite so much as he wants leisure. His aversion from too much work is greater than the want he feels for something else. Indeed, many who inherit 50 acres let the whole out on rent and do no work at all. Such a one would prefer to limit his satisfactions rather than increase his income by working; the cultivator ceases to cultivate when his wants can be satisfied without his cultivating.

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Take another case; there is up and down the province land remaining uncultivated; if it be asked why this is so, the answer will be that there are not enough tenants. There are tenants in the neighbourhood, but they do not want to cultivate more than they already have. They are probably poor, they could increase

their income, but they would rather limit their wants than put forth extra exertion (1).

One more example may be given. A celebrated English writer, Arthur Young, once visited France (1787-89), and was much impressed with the excellent cultivation he saw there; he described how wretched sand had been converted into garden land by incessant industry, and remarked that "the magic of property turns sand into gold." He was accustomed to the large farms in England cultivated by tenants, and thought that the great improvement effected in this sandy soil was due to the fact that those who worked on it were the proprietors, and that it was this ownership that was responsible for the great labour expended. The real explanation is more probably this: in England the farmer had a large holding, so that the profits required to satisfy the wants of himself and his family were derived from a larger area, and therefore the average profit per acre might be small, but the total would be large. In France, the holdings were tiny, the same wants for husband, wife and family had to be satisfied from a much smaller area, so that the average profit per acre had to be large. The French cultivator did not work hard because he liked doing it or merely from the desire to improve his land; he had to work hard or starve; he had to improve his land because unless it were improved it would not yield him enough for his needs. There is no magic about property at all (2); it was not the property but the small size of it and its natural infertility that made the owner work hard and turn the sand into gold. If those owners, whom Arthur Young saw, had possessed large estates, they would probably have let their property on rent and lived in idleness on the proceeds (3).

Under the Irish land purchase scheme thousands of former tenants have become or are rapidly becoming owners. But it is nowhere claimed that they now work harder or "turn their sand into gold;" on the other hand, it is said that their standard of cultivation has declined. In the Punjab colonies many thousands of Crown tenants have the opportunity to acquire proprietary rights, but they see little advantage in doing so. They have security of tenure (occupancy rights) and desire no more. They would be surprised if they were told that purchase would make them work harder.

(1) In 1868 it was noted that each agriculturist on the average cultivated only $2\frac{1}{2}$ acres out of 4 acres available. But as profits became more assured the average area cultivated by each increased considerably.

(2) Lord Ernle calls it "the demon of property."

(3) The moment that the peasant forsakes his life of toil pure and simple for the leisured existence of the landowning classes, he becomes intolerable. Balzac: *The Country Doctor*: 1833.

Security of tenure is

From what has gone before, it should now be clear that the cultivator cultivates to satisfy his wants. The means he employs are the production of crops and the keeping of cattle. To produce crops and to keep cattle involves expenditure, and this expenditure must be recouped from the sale of the crops or of the milk and ghi before the cultivator can afford to take anything for himself; that is to say, the cultivator satisfies his wants, not from his cattle nor from his crops, but from the surplus left over after meeting all the expenses of producing those crops and feeding those cattle. The cultivator lives on the profits of his industry; he cultivates for profit, and it is the expectation of profit that stimulates him to labour. Reduce that profit and the stimulus to labour is reduced also; take away that profit and the incentive to work disappears.

This may sound elementary, but it is important and unfortunately it is apt to be forgotten. Restrictions on the free trade in wheat have been advocated in order that the price may fall; the cultivator would lose a part of the price which free competition would give him and the townsman would gain cheaper wheat; but the loss to the cultivator would come from his profits, and would diminish the incentive to grow wheat; unless the price of other articles were decreased at the same time, the effect might be to render wheat production unprofitable. Similarly, the suggestion that the export of cotton from India should be prohibited in order that Indian manufacturers might get cheap cotton for their mills, would reduce the profits on cotton-growing and would tend to remove the incentive to produce it. It must be remembered that the cultivator will not cultivate if his wants can be satisfied without labour, or with less labour; that there is land lying idle now because the people can satisfy their wants without it; that many would rather reduce their satisfactions than increase their exertions, and it becomes clear that anything that tends to diminish the incentive to labour tends also to diminish the production of crops. In this country it is particularly noticeable that people will accept a low standard of living with small exertions rather than strive after a higher standard by greater exertions.

It has been pointed out above that the cultivator regards the town as a market for his surplus produce. If he were sufficiently expert in the technical aspects of his calling, he would devote himself more to that use of his land which would yield the greatest profit, even if he had to rely upon the town markets for his food. So far from it being his duty to feed the towns, he should not grow food-grains at all if other crops paid better; a cultivator in Bengal may prefer to grow a valuable crop like jute when the price is high and buy rice from Burma; similarly, Arains

around Punjab towns grow vegetables and are free to buy wheat from the market. As commercial ideas replace the old self-sufficing custom, such instances will multiply. The point which it is here desired to emphasise is that the cultivator is as much an industrialist as is the manufacturer; he is no more bound to grow what his neighbours want to eat, than is a manufacturer bound to make what his neighbours want to use, and he should have and should exercise the same free choice as to the disposal of his produce. Manufacturer and farmer alike prefer the nearest market because the costs of transport, etc., are less but they would, and should, elect to sell their produce further afield if their net profits were thereby increased. Ceylon affords a striking example, the staple products, tea, rubber, cocoanut, areca, spices, etc., are grown mainly for export and food is imported in large quantity. So far from attempting to feed the towns the cultivator does not even feed himself.

If it be clearly understood that the cultivator cultivates for the highest profit, then many ideas concerning the land become untenable. Germany employs more men on the soil per hundred acres than does England, and, in consequence of the use of more labour, obtains a higher yield per acre, but the English farmer secures the higher profit per man. The yield of wheat per acre is far higher in England than in the United States, but the yield per man is greater in America. The common measure of yield in maunds per acre is a test of production per acre; it gives little clue to the real state of agriculture, it does not indicate profits per acre or profits per man employed. Perhaps there could be no more clear example of the need for the correct understanding of rural economics than this stressing of the yield per acre. The scientific expert is constantly pointing to the higher yields per acre obtainable from the use of his seeds, his manures, his methods of cultivation and rotation, on his labour-saving devices and machinery and wonders why practical farmers do not rush to follow his advice. They would do so if assured that this policy would result in greater profits to themselves under the special conditions of their particular farms or holdings (1).

The essential points may be illustrated as follows:—

1. Gross outturn per acre, less costs of production per acre,
equals nett profit per acre.

2. Gross outturn per holding, less costs of production per
holding, equals nett profit per holding.

3. Gross outturn per man, less costs of production per man,
equals nett profit per man.

(1) The history of cotton cultivation shows that production may increase without any total increase in value: increase of yield per acre does not necessarily cause either an increase in value of the crop per acre, or an increase in profits per acre.

For trade and commerce, it is usually desirable that the gross outturn should be as large as possible, as this provides the maximum amount of commodities to be dealt in; an owner who takes rent in kind (batai) wants the maximum yield per acre; the cultivator is only concerned with maximum return on his undertaking. If he works by himself, it is the maximum nett profit on his holding that he can obtain from combining his intelligence, his skill, his capital and his labour on his holding. If he employs hired labour, it is highest nett profit per man that he should aim at (1). A government which claims a share in the nett profit per acre looks to this aspect and not to the profit per holding; whereas, were profits from land subject to income-tax, it would be the profit per holding that would interest the Collector. In actual practice, the highest yields per acre generally afford the highest profits per acre, as the cultivator seldom, if ever, reaches a stage where the diminishing returns cause less; but these do not always give the highest yields per man or the highest profits per man, which more nearly concern the cultivator. It is this difference in the test which accounts for the divergence of view apparent amongst writers. They see different aspects and forget why the cultivator cultivates. Where there is no export trade or where the market is inelastic, an increase of produce per acre may lead to a diminution of the area sown, as the local demand may be thus met. Thus the problems involved in the question as to what the cultivator should do to get the highest profits are many and intricate. They require for their solution accurate knowledge of so many subjects that the science of Agricultural Economics or Rural Economics becomes a special study; or, ought to, for it is much neglected. Every locality possesses some special facilities for the production of some crop; and that locality will become the wealthiest which can devote itself to the production of this crop. It is not always a matter of technical skill alone; this will enable the farmer to grow a crop which will win a prize at a show, but if he could not find a market for it he would soon come to grief in spite of his technical skill. The crop for which the locality is best suited is not always the one which should be grown, for there are several other considerations that determine the decision of the cultivator as to what he should grow, the most important of which is the existence of a market for the produce. Where communications are defective, as in such a place as Kulu, it is necessary to limit the production of fruit to so much as can

(1) Venn, p. 89, points out the greater value of produce per worker on large farms. In Wales it was found that this value was double on holdings of over 250 acres compared with holdings less than 50 acres. But the sales from small farms were greater per acre than on large, though both were producing the same commodities.

be readily sold, and, instead, to grow food-grains, often of inferior type. Similarly in South Africa and Australia, climate and soil are favourable to the growing of grapes, but there does not seem to be the market capable of absorbing all that can be produced. In England, with well-organized communications with every other country, it is possible to import wheat and other foods, and to concentrate on what will pay better, such as milk production, or the small garden fruits. In the Punjab some fruits will grow well, but this province is so far removed from the sea that it will always have to produce the larger portion of the food required for the people, while it would be difficult to find a market for all the fruit it could produce. It is this consideration which makes wheat such an important crop; it is not the one which is most profitable for any single cultivator, but for the mass it ranks high as a paying crop, because there is always a market for it. Unfortunately the widespread demand for wheat is apt to give rise to demands that the farmer shall grow it whatever his own views may be. The German submarine campaign during the Great War led many people to agitate for an extension of this crop as an insurance against starvation and the government was led, or misled, into offering minimum prices and bounties on production, both measures peculiarly unsuitable for such a great trading country as England. Thus the original question as to "Why does the cultivator cultivate?" leads to the study of the problems of marketing; the market determines production.

In California, where food can be brought in from outside, it is possible for the farmers to concentrate upon the production of fruit, and to find a market for all they can grow by highly specialised organisation, which in turn is made possible by good communications. In Denmark it is possible for the land to be devoted to cattle and cattle products, because this country has good sea communications and has also a large market for its special products in the large towns of England. Similarly, in Holland, parts of France and the Channel Islands, the land is devoted to growing fruit, flowers and other specialities for the English market. Thus the market determines what shall be grown. The production of wool in Australia and New Zealand illustrates the influence of distant markets; wool is very valuable for its bulk, and accordingly, when pressed in bales, it can be transported long distances at a comparatively small cost in proportion to its price. Australian land could produce more wheat, but this if carried to England would have to compete with wheat from Canada, whereas Canada does not produce wool, and the Australian produce accordingly fetches a good price. There are of course, other factors involved, but these do not detract from the essential truth of the dictum that the market determines

production. The most obvious example in the Punjab is the effect of the demand from the large towns on the cultivation immediately round them. Not only is the land given over to the intensive cultivation of vegetables but the demand for green fodder results in its being grown on heavily manured and heavily watered land on a scale not found a few miles away.

The chief thing essential for everyone is food. Where the whole world can be drawn upon for the supply, the local farmers can trust to being able to buy their food, and grow what will yield the higher profit. But for the country as a whole there must be adequate assurance that sufficient food will be available for the whole population. The farmer may not find food production as profitable as other crops, because the effect of competition with food-grains imported from other countries may bring down the price so low as to leave him little or no profit. As man must have food, he will pay almost whatever price is demanded rather than do without it; if food from abroad is subjected to a protective duty, it may become more profitable to grow it at home. That is to say, the cultivator may be persuaded into growing what ordinarily would not yield much profit by measures designed to increase those profits. Government might, as it did recently in England, guarantee such a price for wheat as will ensure a good profit from its production. The point to bear in mind is that as the cultivator cultivates for profits, his profits must be increased if he is to be induced to cultivate more than he does at present. Restrictions on export will lead to decreased production; if the towns wish to be certain of an adequate supply of food at all times, they should press for those measures which will increase the profits of the cultivator.

Statesmen looking for an adequate food supply for the population naturally wish to see the maximum outturn per acre; those engaged in trade or commerce also wish to see large yields of the commodities they handle as their income is apt to be based upon a commission on the turnover. But they do not usually wish to see so large a supply as would over-reach the demand and so bring down the price unduly. A landlord who takes his rent as a share of the crop prays for a bounteous harvest irrespective of the cost and labour expended by the tenant; but he, too, wishes for high prices for that portion which he hopes to sell, and a glut would involve a loss to him. The cultivator has a more complicated calculation to make before he can decide what to pray for; he desires the maximum net return on his whole undertaking, his capital, his labour, his skill, and his land. His unit is not the acre but his holding: he knows that he would probably get a higher yield on any field or acre if he increased the number of ploughings or harrowings, or if he concentrated the available

manure on it but this might be obtained at the cost of comparatively less care upon the rest of his holding. Then he has the difficult task of making the most profitable use of his resources ; if he has a pair of bullocks fully provided for, it may pay him to use them for cultivation rather than leave them idle, although the gain from the extra work taken from them may be small. The gain he seeks is for himself, and so if he employs hired labour this will pay him so long as this labour brings in more than it costs him ; it may well be that the highest yield per man is obtained from hiring one labourer, but if by hiring two he secures a higher net return than by hiring only one, even although the yield per man is reduced, the net gain to him is greater. The "highest yield per man" becomes subordinate to the highest net return to the employer.

The cultivator has to combine his intelligence, his skill, his capital and his labour (himself and his employees) in such a manner as to secure the net maximum return ; but if he pays out in cash he must recoup in cash, so the maximum return becomes the maximum return in cash or kind as may suit him. To such a man, gross outturn either per acre or per man or per holding may be a very poor test of his financial success. The market for jute in Bengal or for oranges in the Punjab is limited, and if cultivators aimed at gross outturn only they might easily spoil their market and bring down prices against them. The agricultural expert who talks only of higher yields without considering either costs of production or prices for the product may easily mislead. In fact he usually does consider both factors ; when he recommends a new seed of wheat, or a new sugarcane on account of its higher yield, he means a higher yield under the same conditions under which the rival seed or cane is cultivated, that is to say, his improved type will under the same conditions beat the older type in yield over a series of years. Or it may be that he is aiming at quality in which case he may aim at a lower yield in weight but at a higher outturn in cash value.

Theoretical economists delight to discuss the problem of the perfect combination of skill, intelligence, capital, labour and land and point out that for each there is a law of what they term diminishing returns. It is this peculiar principle which distinguishes agriculture from manufacturing industries and which almost inevitably leads to the discomfiture of the agriculturist whenever there is keen competition between him and the manufacturer. In America the intense protective policy in favour of factory industries has led to the ruin of agriculture over a large area ; in England the manufacturer of goods for export has to compete in an international market on a basis of price for quality ; he is assured of the quality and so looks around for means

to bring his prices below those of his competitors and the item which attracts attention is his bill for labour. He therefore aims at cheap food in order to keep down wages, and in this effort he insists upon cheapness without respect to the source of the food whether home-grown or imported from abroad. Actually as there are many manufacturers in England trying to sell their goods in foreign markets, there is a difficulty in arranging the medium in which they are to be paid. They take raw materials from abroad but the value of these is much less than that of the goods manufactured from them; they try to refrain from taking manufactured goods from abroad so that they may manufacture these at home; they may and do take payment in the form of securities of foreign governments or companies, but in addition their demand is for foreign food wherewith to feed their labour at a cheaper rate than this could be done from home-grown produce. Thus the manufacturer for export becomes a rival to the home farmer, and as the manufacturer works under the law of increasing returns and the farmer under that of diminishing returns, the latter suffers.

The law of diminishing returns is merely a statement of experience: it is found that whatever a farmer does he is apt to get a smaller return every time he does it. If he ploughs land once and sows it he gets a certain return; if he ploughs twice or three times he gets larger returns but not twice as large or three times as large as his first return, and there soon comes a point when the additional return obtainable from an extra ploughing does not cover the cost of that ploughing. The same applies to harrowing or weeding or to any other farm operation. It applies to manuring; the second dose of manure gives a smaller increase than the first, the third than the second until a stage is reached when the cost of the dose produces an addition in yield which is less in value than itself. The same rule applies to the feeding of animals for consumption; poultry, geese, sheep, etc., will put on weight with every extra dose of food beyond the amount necessary to maintain the body in equilibrium, if the additional doses of food are equal the amount of weight added to the animal decreases with each dose until the cost of the dose becomes more than the value of the added weight. Not only that but a stage may be reached when the additional dose of ploughing, harrowing, manuring and feeding may actually produce a diminution of outturn. It is certainly easy to over-feed and over-manure and especially, to sow too much seed.

From the foregoing it will be seen that the aim of the cultivator is more easy to describe than to attain. The law of diminishing returns seems to be a law of life; it applies to each operation of agriculture, and therefore the cultivator has to consider it in

whatever he does and to get the maximum net return on his enterprise he has to secure a finely adjusted balance. Where he has one pair of oxen and grows a number of crops, he has to distribute the work of his oxen amidst his fields so as to secure the most profitable return from the whole. In theory this sounds extremely difficult, but as agriculture is one of the oldest arts of man the pith of the experience of the past has been collected in the form of proverbs or sayings, which usually stand well the test of scientific experiment.

It is also largely the accumulated experience of the past which has more or less determined the crops most suitable to soil and climate of particular tracts; wheat in the Punjab and rice in Madras are not the yearly selections of a number of individual cultivators; they are grown according to custom, which means that from of old time the forefathers of the present cultivators have found these crops best suited to local conditions.

One result, of this prolonged repetition of the same crops, or series of crops, is that the demand or market also becomes fixed; diet everywhere is largely a matter of custom both for man and beast and the dislike of change operates to discourage the growing of new crops of foodstuffs. It may be that the soil and climate of the Punjab are suitable for the growing of excellent oranges, but if the market will not absorb the outturn, loss and not gain may result from the enterprise of the grower. Kulu could undoubtedly produce many times its present crop of fruit, but it is not clear that a profitable market would be found for a greater supply. Where a country is within easy reach of cheap transport by sea, it is usually able to find markets in which its produce can compete with that from other countries, but the Punjab is far from any seaport and the long lead by rail makes it unlikely that it will ever be able to send overseas much bulky produce. Staples like wheat and cotton have a world-wide demand; fodder crops have a good home market; but beyond these it is not easy to say offhand what the cultivator can be assured of selling. It is for some such reasons as these that the colonists of the great new areas in the province have grown almost exactly the same crops as they grew in their home districts. In short, they have tried to serve the market they know. The market, then, is of dominating importance for all agriculture which is not aimed at satisfaction of purely local needs; as soon as the cultivator steps across the border of the self-sufficing stage he becomes involved in marketing problems and the intricacies of prices, supply and demand.

From the above it will be seen that the study of rural economics is not of mere theoretical value; it is a vital necessity to successful expanding agriculture. As the ordinary cultivator

cannot be expected to master the subject, it becomes the duty of his leaders to take up the task if they wish to lead him to prosperity.

The province could produce many things which it is at present difficult to market; for some products it finds markets about which too little is known and may lose them for lack of the knowledge how to retain them in the face of competition. It exports large quantities of gram eastward, but its ultimate destination and its suitability for its purpose require investigation. Rewari can produce fine barley and could produce much more but although its suitability for brewing has been ascertained, it is not easy to make sure that it will sell in the market for which it is so well suited.

In one respect the task of the ordinary cultivator has been lightened; in new countries where land is plentiful and cheap, the problem as to the area to be cultivated by each individual is of urgent importance; but in old inhabited countries like India there is usually a scarcity of land, and the area which an individual cultivates is apt to be fixed for him by his inheritance.

The question as to the area most suitable for one man under Punjab conditions may possess theoretical interest, it is hardly a practical problem. In the colonies there was a magnificent opportunity of experimenting with areas of different sizes in order to discover what was the most suitable economic unit. Actually the square or rectangle was adopted as the unit not from any economic reason nor as the result of careful experiment, but as a matter of convenience in survey. Where the cultivators are sufficiently well-to-do to be able to select their area and the capital they are prepared to use, as in Lyallpur, they seem to find that from 12 to 14 acres per pair of bullocks is a suitable area for a one-man holding; and throughout the province this seems to be the normal maximum for a cultivator with a pair of oxen.

Practical considerations arising from the scarcity of land also relieve the cultivator of some of the problems discussed above; for where a man is not able to increase his area at will, he is forced to intensify his standard of cultivation in order to secure the wherewithal to feed his wife, his family and himself. Where the area in his possession is too small to occupy all his time in absolutely necessary work, he may be driven to put in many more hours, not to get a fair return on his extra labour but to get any return at all which will help to feed his household.

In the foregoing pages, the case for the cultivator has been stated, and it has been argued that he has the same right to seek the greatest profit to himself from the use of his capital, labour, skill, land and enterprise as any one else.

But there is a strong feeling that there is another side to the question; the intense aggregation of people into towns is in all

countries a comparatively modern feature, and the separation of townspeople from agriculture and the source of their food seems to have produced a feeling of nervousness and insecurity which finds an outlet in the demand that the cultivator is under an obligation to feed the town. Perhaps the fact that so many towns people are descended from villagers may account for the claim to be fed, or it may be a relic of the age-old self-sufficing spirit, but whatever the reason there seems to be in many people a feeling that the land is something more than the private property of its owners, and that the public in general (or the nation as some prefer to say) have still some undefined rights to it. It is curious that along with the increasing congregation of people into towns there has been growing a feeling that the land should be made available for those who find urban life too strenuous.

Socialism is essentially a town-bred doctrine, arising largely from the feelings aroused by the extremes of wealth and poverty in close contiguity; it is the socialists who demand that the land should be regarded as belonging to "the people," and should be treated as public property and be made available for those who fail to find in towns employment on the terms they or their trade unions regard as suitable.

In the Punjab, the land is "nationalised" in two senses; in the old settled districts, the State is supreme landlord with rights of resumption in case of default in payment of land revenue, but subject to the payment of this revenue and to good conduct (for confiscation is still legal in certain cases) the land is held in proprietary right by millions of owners. In the colonies the land is still for the most part State property, in the possession of State tenants. But even under these conditions, it is unlikely that any government of the future will advocate dictation to cultivators as to the use to which they shall put their land. The townsman of the Punjab, as of England, feels that he has a right or claim in the land. Where there is an emergency and an actual shortage of food is threatened, public interests must override those of the owner or cultivator, but the modern statesman, instead of ordering the cultivator to grow food for the towns, encourages him to do this by bounties or assured prices, the cost being met in the end by the non-cultivating part of the population.

But when there is no emergency, the importance to the town of the use to which the land is put leads to a claim to interfere with the cultivator's discretion; as the source of the food of the people, of the raw material of industries, and of the commodities of commerce, the land, it is argued, cannot be left to the unregulated whim of the cultivator to do with as he likes in the search after the greatest profit to himself. The cultivator, it is urged, is in reality performing a public function, and although he

is seeking a living, and, if possible, some profit for himself, he is really in charge of a great national asset, and so is responsible to a wider circle than his banking account, even to the country at large. It is not only in time of war that the cultivator has duties to the people as a whole, but in the pursuit of peaceful avocations there are many who look to him to provide them with the raw material for their industries. Amongst some writers there is more even than this; it is held that a country dependent upon agriculture must somehow be "backward" and that for a fuller, more moral and intellectual life, there must be industries, and as agriculture has to provide the raw material it should be so directed as to provide those raw materials which the seekers after the higher life are prepared to regard as suitable for the factories they are willing to embark upon. This quaint doctrine does not call for serious discussion here; it is sufficient to point out that the development of industries is desirable as a means to the increase of the wealth of the people as a whole, that the growth of industrial towns will provide markets for agricultural produce and that such new markets will provide a much needed stimulus to the intensification of agriculture. It needs no argument to convince everyone that if only the land of the province as a whole were cultivated as intensely as that surrounding the large towns, the increase of wealth would be immense.

In England it seems to be admitted that if farmers were allowed to seek only their own profit, they would reduce the amount of cereals grown as foodstuffs, would throw much arable to grass and reduce their labour supply; some writers urge that "public opinion" would not tolerate this and that it should not be allowed in the public (or national) interest. But in England about 80 per cent. of the people live in towns as compared with 10 per cent. in the Punjab, so that what in England may be regarded as a public or national interest must here be only the case for a small minority. Moreover, in England there is a recognition of the fact that if national or public interests demand that farmers should sacrifice their own profits, some compensation is due from the public or nation.

It may be useful to attempt a summary of this important chapter, especially as the argument has been stated in different ways from different standpoints. Owing to the inadequate knowledge of rural economics, there is a marked tendency in many countries to dictate to the cultivator what he shall do with his land and in particular to force upon him aims other than his own greatest profit. There is undoubtedly a widespread feeling that the land is a national asset and as such should not be left to the unregulated control of those who own or cultivate it; this feeling was strongly reinforced during the war when foodstuffs

*Agriculture is more a way of living than a business.
Importance of standard of living*

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became scarce in more than one country, and this in turn gave rise to a desire that a country should be self-sufficing in food production so as to avoid similar hardships in future. The comparatively modern development of large towns has brought into being a population whose knowledge of agriculture is limited to the food upon its tables; a similar development of factory industries has led to a demand for cheap food for the workers; while the sight of wealth and poverty in close contiguity has led some to seek in the fields the cure for evils bred in the towns. Perhaps the very openness with which agricultural operations are carried on encourages ignorant criticism and induces many to offer advice and suggest changes which they would not dream of doing to captains of industry. Many people who have never thought of tendering their opinions to manufacturers of motor cars or cloth, of ships or steel, of glass or paper, do not hesitate to burst in upon the intricacies of modern farming with streams of unwanted and generally worthless advice. There are others who, being themselves town bred, are apt to confuse national interests with town-interests, whose public may mean a few industrialists only or whose outlook on the world is tinged with the desire to swell their own bank balance, and who with the best intentions would impose on the cultivators a strict body of rules and regulations the object of which would be the benefit of any or every one except the cultivator himself. Others there are whose pre-occupation is with the health of the community, either in pursuit of general happiness or in search of sufficient stout recruits for the next war, and these see in the country little beyond a great breeding ground of strong, healthy people. Amongst all these there is an altogether inadequate appreciation of the knowledge, experience and skill required to make a successful cultivator, of the long hours of work, of the incessant demands which know no hours fixed by man-made laws and of the numerous enemies which the cultivator has to control. But strangest of all, there is a failure to recognise that the cultivator is much as other men in his desire to seek the greatest return he can get for his labour, his skill, his experience and his enterprise.

Like everyone else he is entitled to work for his own living, for his own benefit and for his own betterment; if there be a national emergency requiring a limitation of private self-seeking for the public good, then the cultivator like everyone else may be required to forego his own profit to serve the larger end, but, a national emergency apart, he has full right to do what he considers best to ensure for himself the highest return he can win.

Country does not live only for economic motives

CHAPTER V

THE INFLUENCE OF DIET UPON AGRICULTURE AND INDUSTRIES

Diet the result of environment—of which it becomes a part—and is bound with custom—which means stagnation and poverty—acreage used for the diet of the people—low grade cropping—abstemiousness in drink and its effect on industries—the simple diet has the same effect—and further prevents the change from extensive to intensive cultivation—which however is making slow headway as the people adopt new foods—the waste on fodder crops—Summary.

(The extent to which modern man is a product of his environment is seldom realised in its practical implications; many will admit, as they must, that they are largely bound by local custom in food, clothing, occupation and behaviour, but fail to see that custom is only the human side of environment, and that this has been moulded through the ages largely by another side, namely, the local physical conditions imposed by nature. It is idle to question whether man eats wheat because he lives in a wheat-growing district or whether he grows wheat because he is a wheat eater, or whether he eats rice because he lives in a rice-growing tract or grows rice because he is a rice eater. In both cases nature imposes the conditions, here favourable to wheat-growing, there to rice, and wheat in the one place and rice in the other become part of the environment, and it becomes as much a matter of local custom to eat wheat in a wheat-growing tract as it is to eat rice in a rice-growing one, and the same applies to the production of both grains; in the new colonies away from the old villages, the newcomers grow wheat, just as the newcomers to cultivation in the deltas of the Ganges and Irrawaddy grow rice. Man likes to believe that he can exercise free will and so can make his own choice in the selection of his food, and so within limits he can, but actually few attempt to resist the force of their environment, they grow habituated to it and succumb to it and dislike food to which they are unaccustomed. A Bengali in Lahore sends to his own province for the rice which he considers better than that grown in the Punjab, and nothing would persuade an Englishman that the food of England is not the best in the world, or a cultivator from Jullundur that his *gur* can be equalled anywhere in flavour. The fact that the diet of a people is more a result of their

environment than of deliberate choice is insufficiently appreciated; in the Chapter on the economic causes of poverty it is pointed out that in many cases diet is the direct result of grinding poverty or of necessity; the north of Scotland is outside the wheat belt and can produce little more than oats, so the northern Scotch eat largely of oats and they have persuaded innumerable others in England and elsewhere that oats make very good human food; Tibet can produce little more than a poor barley so barley is the staple food of Tibetans. The Japanese are great eaters of fish because they live in islands with long narrow stretches of country nowhere far from the sea which teems with fish. The people of Australia and New Zealand eat much mutton because their great industry is wool growing and mutton is a by-product. The number of sheep that can be maintained on their pastures is limited and as they yield the best wool when two years old, it is the aim of the sheep farmer to get rid of his older sheep to make room for the younger; so the older sheep are slaughtered and to eat the meat is a matter of economy. If there were a successful agitation against the slaughter of sheep this great industry would disappear. The damp climate of England and the frequency of rainfall make the land suitable for rich pasture and so animal husbandry has for centuries been a considerable industry; in the old days before the introduction of root crops and other winter foods, it was not possible to feed all the cattle through the long winter and so some were slaughtered and preserved with salt as the winter diet of the people. The people were too poor to throw away the food material and meat has become such a fixed item in the English diet that visitors can never get enough vegetables. Incidentally it has been the strengthening diet which has made the English so vigorous and strong. When England was a great wool-producing country, the mutton had to be eaten as in New Zealand to-day. The French are not so great meat eaters as their country seems more adapted to fruit and vegetables. Once the meat-eating habit was forced upon the English by poverty it has been retained from necessity, for the rich pasture is ideal for stock breeding and stock fattening, and no improvement in stock by selection is possible where the unwanted animals have no economic use.

Very little consideration will show that for most of the people mentioned an exchange of diet between one another on a large scale would be impracticable; the Punjabi can no more become a great fish eater than the Japanese can become great wheat eaters; it is no use Tibetans or Scotchmen pining for rice nor for Bengalis to sigh for barley and oats.

The diet of a people, then, is a result of their reaction to their environment, they become as accustomed to eating wheat as to

*Specially where there are no easy
cheap communication with sea
people consume the local grown products.*

↑ growing it; where a country has cheap and easy communications by sea with other countries, as is the case in England, its people are not confined to local products but can vary their diet by importing from other countries, and the diet of the English is probably as varied as any in the world. But a land-locked province like the Punjab can not afford to import large varieties of food from other countries on any extensive scale, because her people are too poor to pay the heavy freight by rail and so they must depend chiefly on what the soil produces.

h And here emerges the first fact of great economic importance: any people in any part of the world and in any walk of life who submit without protest to the limitations of their environment will not change until that environment changes, and as changes in environment are largely the result of human effort, those who accept the environment remain poor and stagnant. They accept what their environment *does* produce and not what it can be made to produce; they placidly continue in a rut, putting forth such energy only as remaining in a rut demands. The mere fact that they are content with their old diet makes them satisfied with their old crops, and progress to better things is blocked by the inertia of apathy. The importance of all the above becomes clear when it is remembered that agriculture in the Punjab has three objects only: the production of (a) food for man, (b) food for beast, and (c) raw materials for industry. Of the thirty million acres annually sown, about four (cotton and oilseeds) are devoted to the third object, while over sixteen million acres (excluding gram) are devoted to supplying the diet of the people in wheat, barley, rice, maize, millets and sugarcane. The large area under fodders is primarily intended to supply power for agriculture in the form of draught bullocks and only secondarily to supply milk and meat for human consumption; the five or six million acres under gram yield food for both man and beast, mainly beast. It is not possible to state how much of the area under fodders and gram contributes directly (as gram) or indirectly (as milk, ghi and meat) to the diet of the people, but to the sixteen million acres under food crops there must be added a share of those under gram and fodders in order to arrive at the full extent of the total cultivated area which is concerned with the diet of the people. This huge area provides at present what the people are content to eat; so long as they remain thus contented the cropping must remain unaltered. All attempts to introduce on a large scale more profitable food crops, higher yielding food crops or more nutritious food crops must fail unless the people are prepared to alter their diet and consume the new crops. One example is the potato; this grows well in the hills, giving yields worth well over a hundred rupees an acre as compared with the few rupees worth of red millet it displaces;

it can also be grown in the plains. It has great food value, responds well to manuring and intensive cultivation and is an excellent crop for well-irrigated lands, but its cultivation is limited by the slowness of the people in adding it to their diet; in the last thirty years it has gained wide popularity but it is still a very minor element of diet when compared with its position in Europe. Cabbages give a huge yield per acre, their food value is undisputed, they are rich in vitamins; they respond freely to manuring and intensive cultivation and like potatoes are a good crop under well irrigation, but their consumption is limited to a much smaller area than even the potato. Other examples could be given, but it should be now sufficiently clear that the cropping in the Punjab is remarkably low grade (*e.g.*, nearly ten million acres are under gram and millets) and so there emerges the second great fact, namely, that there can be no advance towards higher grade cropping in the province without a change in diet.

The next fact of great economic importance is that the diet of the people is not only simple and unvaried, enforcing a low grade agriculture, but it is consumed in the simplest form, and there is in consequence lost to the province practically the whole of the industries based upon the preparation of foodstuffs for consumption which elsewhere form no inconsiderable portion of a country's total industrial activity. This simplicity of diet has such widespread effects and exercises such influence over the poverty of the province that it calls for more detailed examination. The fact that wheat is eaten as unleavened bread robs the country of the possibility of such industries as bakeries, biscuit factories, cake making, etc. The lack of variety excludes such industries as the canning of fish, fruits and vegetables, and the preservation of fruits as jams, etc. The prevailing vegetarianism forbids the large number of industries engaged in the preparation of animal food into various forms, soups, beef tea, essences and so on just as it debars the province from the earnings obtainable from stock raising, fattening, salting, curing, poultry, eggs, cheese, etc.

The abstemiousness of the great majority of the people is matter for unalloyed congratulation, and nothing that is here written must be misinterpreted as an argument in favour of drinking, but the dispassionate economist must face the fact that the province loses the income from all the industries connected with the manufacture of various beverages, of beer from hops and barley, of whisky from barley, of wines from grapes (which the west of the province can grow in quantity) of cider from apples and so on. The prospects of a great fruit industry are seriously hampered from the custom of consuming fruits in their raw state instead of jams, preserves, drinks, etc.

Even preserved lime juice and orange juice are imported from abroad into a province whose fruit growers are capable of turning these out in excellent quality. Instead of a multitude of industries engaged in producing various drinks the only factories appear to be those making soda water and ice.

It is the simplicity and lack of variety of diet that have been responsible in the past for the omission to grow more vegetables ; the last thirty years have seen considerable change near large towns and cauliflowers and potatoes are found in all bazaars but there is still far too little demand for all the province could produce. The potato has already been exalted but it deserves to be made widely known that its cultivation provides a great amount of employment, maintains the land in a high state of cultivation, and furnishes in England the most important single supply of home-grown food ; as the outlay involved in growing the crop is very large it affords a good opportunity for the investment of capital in agriculture. That it can be grown with profit is illustrated from the Reports of the Agricultural Department which state that improved varieties in the Simla hills gave profits over the local variety of Rs. 177 per acre in 1923, of Rs. 100 per acre in 1924 and of Rs. 130 per acre in 1925, and the series could be continued(1). But potatoes are only one crop ; the province has neglected its ability to produce peas, beans, cabbages, celery, artichoke and other good foodstuffs. All these can be produced of excellent quality, all are of value in nutrition and all give a high value per acre. Similarly the province can produce a variety of fruits in great quantity and of excellent quality, but the market lags behind and the health of the people suffers from the lack of what could be so easily supplied.

The third important fact then that emerges is that the simplicity and lack of variety of the people's diet form an almost insurmountable obstacle to numerous industries, to the introduction of highly valuable crops and to the employment of more labour and more capital on the land. The word "almost" has been inserted because there are examples of a deliberate change in diet which have affected agricultural production. Germany altered her production from wheat and sheep to pigs and potatoes and it was the enormously enhanced production of food stuffs thereby caused which enabled her to withstand the allied blockade for years. Bengal is eating more and more wheat in response to propaganda in favour of improved physique ; in the United States of America diet is changing with the growth of the urban population whose sedentary habits call for less energy-producing foods ; the success of stock breeding in England has necessitated

(1) Cf. Agricultural Tribunal of Investigation and Punjab Reports.

a campaign to "drink more milk," a fact which deserves to be more widely known. Even in the Punjab, as has been noticed already, diet is changing, more wheat and less millets are now consumed, oranges have become an article of common diet and the village shop now offers a far greater variety of food-stuffs than it did thirty years ago. But the great fact remains that for the greater part the diet of the people consists of food-grains which do not respond readily to intensive methods. There are over nine million acres of wheat; the outturn is deplorably low, the value per acre is low, and although these can be increased by better cultivation, green manuring, etc., the crop does not give a sufficiently high financial return to encourage greater expenditure on labour, manuring and intensive cultivation. The nine or ten million acres under millets and gram similarly give no adequate financial return to greater expenditure on cultivation. Maize is more responsive, but for some curious reason the people do not eat much of it. The Southern States of North America are below the wheat belt and so grow quantities of maize which is a popular item in daily diet in various forms, and it is consumed fairly generally in England, so there is hope that it may grow in popularity here, in which case a crop that answers to intensive cultivation will become more widespread. The area under vegetables is so small that no details are given in the official annual returns.

The fourth great fact that now emerges is that the simple diet of the people imposes an almost insuperable barrier to the change from extensive to intensive cultivation, and to the development of agriculture from low grade cropping to high grade. This is the basic reason for the great waste of opportunity afforded by well-irrigated lands and for the extensive waste of canal water on cheap crops. It explains the small use of manures in the province and therefore the small amount of capital invested in cultivation. It would seem impossible to ensure the progressive increase of wealth without a higher value of cropping per acre. Everyone knows how the province gained from the introduction of American varieties of cotton with longer staple, which though perhaps giving less lint in weight per acre yet yielded a higher gross return and a bigger profit; the gain was possible because there was a market for the new variety. If the cropping and cultivation of the Punjab are to be so improved as to give higher returns, there must be found a market for the new produce, and that market must be found in largest measure in the diet of the people which accounts for nearly 80 or even more per cent. of the total yield of food stuffs.

Much that has been written above about the diet of man applies to the food for beast. Millions of acres are devoted to the

production of fodder crops to maintain a host of cattle far in excess of the requirements of agriculture. If the number could be reduced to that necessary to supply the draught power actually needed, a great saving of land from fodder crops could be effected. Even if a portion could be placed under fodder crops that yield a higher return (in food value not weight) per acre, a considerable area could be spared for more profitable use. The Agricultural Department has already achieved marked success in this direction, and the larger grantees in the colonies are contributing experience of incalculable value to the province as a whole, so that there is less need to stress here the desirability of so varying the diet of the huge animal population as to secure the same or more power for less sacrifice of area. In the U.S.A. the replacement of the horse by the motor tractor set free millions of acres which were then devoted to money crops; the same is not likely to occur here but the example is worth bearing in mind when discussing the possibility of reducing the waste on the production of animal food.

Nothing that has been written above should be misinterpreted into an argument for the abandonment of wheat as the staple diet; wheat is one of the best, if not the best, human food known, and the diet of the Punjabi is the best in India in all the requirements of the human body. But a great gain to the province would result if the dependence upon wheat alone could be changed for a more varied diet. It is possible to have too much of even such a good thing as wheat, and an increased consumption of fruit and vegetables would not only bring more health to the consumers but would also encourage the employment of more capital and labour on the land. The Englishman eats much the same ingredients as the Punjabi, but he eats smaller quantities of each and more variety in the day, and also he eats them in a form which has required the expenditure of labour: the orange becomes marmalade, the oats become porridge, the wheat becomes leavened bread or biscuit or cake, and the fruits have been preserved, canned or dried. In this way the diet provides employment for numbers of persons, and as there is much under-employment and much leisure in the province there should be scope for an improvement here.

The effect of diet upon both agriculture and industries should now be clear: the placid submission to environment involves a people in stagnation and poverty, and contentment with a customary diet means contentment with an old customary agriculture; there can be no advance towards a higher standard of cropping without a change in general diet. The simple form in which the food is eaten deprives the province of numerous possible industries and opportunities for employment of labour and capital

and further the simplicity of the diet imposes an almost insurmountable obstacle to the much desired change from extensive to intensive cultivation and to the general development of agriculture. If there is to be progress in the uses to which the land is put, there must go with it a change in the ordinary diet of the people, as this forms the chief market for the produce. It is curious but true that the people have erected the most powerful barrier to their own advance.

CHAPTER VI

THE ECONOMIC DEVELOPMENT OF THE PUNJAB

The geographical position—a landlocked province—with no communications—effect on agriculture—history of railway development—present position—capital expenditure and return—branch line policy—should the railways be under the Punjab Government?—the financial burden—responsiveness of the railway administration to Punjab needs—tramways—the lack of roads—and of material suitable for them—financial obstacles—possible solutions—long term loans for permanent works—The five rivers—early irrigation works—development of canals and its effects on cultivation—displacement of wells and cuts—canals in old districts—the reconstruction of inundation works—the colony canals—agitation by State tenants—effect of irrigation on population in the colonies—in old districts—effect on production of wealth—the continuing development of existing canals—water rate—the responsibility and the risks to the State—indirect receipts and gross profit—dependence of irrigation on forests—the critical position of the Punjab—relations with Indian states—Summary.

No discussion of the economics of a country can proceed very far without a clear understanding of its geographical position. No person produces all he requires, he is dependent upon someone else for one article or service or other; no country produces all the goods its people require in the exact proportion in which they require them. There is always a surplus or a deficiency, and the disposal of this surplus and the supply of this deficiency constitute the foreign trade, appearing respectively as the exports and the imports. There is a theory held by some that exports produce weakness, while imports indicate existing weakness. It seems to be thought that what is exported should be retained in the country to benefit its inhabitants, and to lower prices; while what is imported should be produced within its own borders. In European countries exports are regarded as a sign of economic strength and imports as a mark of weakness. Since the war this idea that international trade is somehow bad for every one has gained ground amongst ignorant people under the name of economic nationalism. How voluntary exchange of commodities amongst free and intelligent people can be regarded as harmful is difficult to explain; apart from the question of currency there is

no essential difference between trade between peoples on opposite sides of an administrative border and trade between peoples on the same side. It is the nationalism of ignorance, but unfortunately, most politicians exhibit much ignorance of economics.

In a normal year the Punjab produces more wheat than its people require for their own consumption, and the amount in excess of current needs is exported beyond its borders. It is of little importance to the producer or to the merchant whether this surplus is sold to England or to Bengal; it is sold to the highest bidder, and that is good for both. In discussing the Punjab, it is not necessary to enter into the question whether India as a whole produces less than her people require for the full maintenance of health and efficiency. The people of this province are for the most part wheat eaters, and the fact that large quantities of wheat are exported may be accepted as proof that an actual surplus exists; it is sometimes urged that all the wheat grown could be consumed within the province if the price were so low as to impose no obstacle on acquisition, and that therefore the sale of wheat outside the province in exchange for a full price is somehow an injury to its people. The obvious answer is that wheat would not continue to be grown in such quantity unless it could command a price sufficient to cover costs of production and a reasonable return to the grower. Whatever may be true of the rest of India, there can be no doubt in this province at any rate that the production of food was until recently increasing faster than the population. Were there no outlet, no purchaser, for this surplus, it would not be produced. The cultivation of land requires the expenditure of energy and capital, and if there were no return for part of this expenditure, the agriculturist would not put forth that amount of energy or waste that portion of capital.

In the opinion of some people this surplus wheat should not be exported. If the reply be made that in that case it would not be grown, it is argued that the labour and time thus saved should be devoted to the production of those things that are now imported. This argument is based upon a strangely complete misunderstanding of the whole requirements of a country's prosperity and ignores the importance of geographical position and all that is bound up with it. If any country is to become prosperous, its people must concentrate upon the production of those things which all its circumstances combine to enable it to produce to the greatest advantage, or at least to the greatest profit. It is not a question as to whether it is technically possible to produce in the Punjab this or that article that is now imported from some other province or country; but whether the substitution of this or that article for something now produced

in excess of local requirements would yield the greater profit. Most countries have natural characteristics that render the production of some things easy and of others difficult. Climate, natural resources, geographical situation determine to a considerable extent the ends to which the energies of the people are directed. Until transport and communications attained something approaching their present efficiency, there were many places where people continued to turn out things for the production of which local conditions were not well adapted; with the steady improvement in communications and the cheapening of transport, competition has tended to drive out local industries from places whose special conditions did not favour their continuance and to concentrate them where there are unusually valuable facilities. It thus becomes of great importance that a close study should be made of the special local conditions of the Punjab enforced by its geographical position. The latter cannot be changed, although it is possible to imagine measures which would enhance the advantages or mitigate the disadvantages. If progress is to be stimulated, all the conditions precedent to such an effort must be clearly understood and their influence defined. In promoting industries, for instance, the technical problems may be the easiest to solve; the cost of production is an important factor but not necessarily the most important. For success, the commodity must be transported to the consumer and must by its quality, price, etc., prove not less attractive to him than competing commodities open to purchase at the same time and place. The Punjab could grow other things in place of wheat, oranges for instance, that would at present prices yield a higher nett profit per acre and of considerably greater gross value; but it is far from certain that a satisfactory market could be found for all that could be produced in which cases prices would fall to a level which would soon kill production. It is this problem of markets that will exercise a determining influence on the future development of agriculture and industries and to refuse to sell goods in a market merely because it is across a provincial or country boundary is pure folly. If the province is to compete successfully with rival areas it must have in its favour some advantage that the other areas do not possess in the same degree. That is to say, the province will have to devote its attention, not to articles which people would prefer to make, but to articles for the manufacture of which its local conditions are in some special measure adapted. Sentiment may influence sales in the home market, more material considerations will affect trade in distant cities. It is the consumer who will determine whether the Punjab shall manufacture cloth for export, and it is the consumer who will have the last word in the development of industries whose

outturn exceeds the local demand. The access to possible markets is thus a matter for serious study. Japan consists of islands with a large number of good harbours, giving free passage to the continents of Asia and America; its State-stimulated industries depend for their existence on the export trade, there being comparatively little consumption of the manufactured articles at home; the effect is to place Japanese industries at the mercy of the foreign consumer who is able to compare its goods with competing articles from other sources on the basis of price for quality. Japan has one great advantage over the Punjab in that it has almost at its doors the huge market of China whereas this province, apart from India, has no markets within easy distance. Moreover, the Punjab, being landlocked cannot secure the profit on transport of its trade which is open to a maritime province.

The province is not only completely landlocked, it possesses no rivers, navigable for even medium size craft, giving it access to the sea (1); and it suffers from the further disadvantage of being bounded on three sides by countries that offer no markets for its products. The province, in fact, represents a densely populated peninsula thrust north-westward into a very sparsely populated area. On the north lie Kashmir, Ladakh and Tibet and beyond these again the deserts of Turkestan. On the west are Afghanistan and Beluchistan and beyond these Persia. On the south lie Bikaner and Rajputana, comparatively sparsely populated and undeveloped. In all these countries there is not the number of consumers required to make them valuable markets for Punjab produce. With them there will not, for many years, be any great volume of trade. On the east, the United Provinces present a rich market but the two areas are so similar in soil, climate and people, that they produce similar commodities, and so compete with each other for customers rather than offer each other mutual markets.

The geographical position of the Punjab has had, and must continue to have, very far-reaching consequences. Its corner position, amidst comparative deserts, prevents it from having any considerable through trade and deprives its people of the opportunity, so important in England, of acquiring wealth as middlemen and carriers of trade across its frontiers(2). Prior to the advent of the railway, such trade as existed was almost confined to Afghanistan and Central Asia, but it was never of

(1) That is to say, no rivers so suitable for light traffic as are the rivers of Europe. There is a great deal of misunderstanding in India due to the different connotations of the same word when used by Europeans and Indians.

(2) Holland supplies a contrast: up till recently it had no mineral resources, few manufactures, no highly organised agriculture and yet grew prosperous as carrier and middleman. Its geographical position was its chief asset.

great value or of great volume, and has shown little, if any, capacity for expansion; the roads are not suitable for anything but pack animals, so there is no wheeled traffic and no scope for modern methods of transport. There was practically no trade of importance with Bombay and very little with Karachi as both routes passed through deserts. The rulers of the province who preceded the British were not great road builders; stone metalling was practically unknown; the great rivers were unbridged; organised transport facilities did not exist. In time of plenty grain was cheap to an extent as almost to be unsaleable, for there was no market for the surplus; in time of scarcity grain could not be imported from distant places and starvation resulted. Famines were always local calamities. Whenever one occurred there was an unsaleable surplus of food in some other part of India, but there was no means of acquiring knowledge of such surplus and no facilities for its rapid and cheap transport to the point of acute demand. Even now, the rivers impose serious obstacles to commerce where bridges do not exist. The Jumna from Delhi to Ambala can only be crossed by ferry, and no considerable traffic adopts this method. On the West, the Indus imposes a still more difficult barrier. For several months in a normal year, when the five internal rivers are in flood, there is very little trade across them except by the very few bridges carrying rail or road.

In the absence of organised facilities for transport, the need for an adequate network of communications assumes supreme importance (an importance recognised by the constitution of a permanent Board of Communications); in the absence of a modern transport system, highly specialised agriculture is impossible far from the big towns. Indeed, economic progress is almost impossible in any country isolated from the rest of the world, and the position of Punjab villages in former days is now hard to realise. The many products which the town demands could not be grown except in their immediate vicinity; there was little object in good cultivation if there were not good communications to market, and there was nothing to be gained from producing more than local consumption required. As has been pointed out in the Historical Retrospect, until communications had been developed and the trading and commercial communities had gained strength and wealth, it was hardly practicable for the cultivators to seek gain from the production of goods for market. The harvest sufficed for the current needs, there was little or no spur to greater effort, the accumulation of wealth would merely bring down some rapacious official with excuse for confiscation. The expansion of agriculture, the construction of great works of irrigation, the introduction of railways and of metalled roads were

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all inter-dependent ; railways and canals were built by Government with the aid of borrowed capital, and roads from the increasing revenue which the resultant expansion of cultivation brought in.

The development of the Punjab may be illustrated by the following figures :—

Year.	Railway mileage.	Canal mileage.	Miles of metalled roads.	Cultivated area (mil- lions of acres.)	Land Revenue (Lakhs Rs.).
1872-73 ..	410	2,744	1,036	18.8	201
1882-83 ..	600	4,583	1,467	23.4	206
1892-93 ..	1,725	12,368	2,142	26.7	223
1902-03 ..	..	16,893	..	26.8	230
1912-13 ..	4,000	16,935	2,614	29	360
1922-23 ..	4,441	19,664	2,938	30	400
1932-33 ..	5,500	19,601	3,904	30.9	428

Of this great development, some details must now be given in order that the new generation may gain a proper perspective.

There are few facts which can be applied to all India but one is that the rainfall is confined to one, or at the most two, seasons in the year, and that, in between, the country remains dry for months at a time ; one result is that the rivers have not the same evenness of flow that is usual in other countries ; in the dry seasons they dwindle to mere shallow trickles unsuitable to float boats of any size, while in the rainy seasons they swell into great streams whose powerful currents impose great obstacles to traffic. It may be that in ancient times there was more boat traffic on the Punjab rivers than there is now ; there was an Indus flotilla which ran as far north as Multan until recent years ; the army marching from Lahore to the siege of Multan in 1848 used the Ravi and Sutlej for its heavy baggage, and the Indus was used for supplying the army in Afghanistan in the war of 1839-42. The Indus is still used for southward traffic. But in general the great areas north of Multan and Delhi were never well served by the seven rivers which drain it.

The(1) great movements of commodities familiar to-day took their origin from the introduction of railways. The Sind-Punjab and Delhi Guaranteed Railway Company, registered in 1855, began operations between Karachi and Kotri and opened its first line in 1861 ; another stretch from Lahore to Amritsar

(1) Cf. Memorandum on the North Western Railway presented to the Royal Commission on Agriculture.

was ready by 1862, and this was rapidly extended east to Ghaziabad and south to Multan by 1870. The Indus Valley State Railway constructed a line from Kotri to Lodhran and Multan, which was ready in 1878. The Punjab Northern State Railway seems to have been actuated more by military than by commercial reasons when it constructed the line from Lahore to Jhelum in 1873 and to Peshawar by 1883. In 1886 the various administrations were amalgamated under the name of the North-Western Railway, a State concern, and thereafter rapid progress was made with further construction. But for many years, owing to development of irrigation, the demand for new lines increased faster than they could be supplied; the great Chenab Colony (now Lower Chenab) had at its inception no railway to carry away its produce and it was not till 1896 that Lyallpur was reached.

The Wazirabad—Sangla Hill—Shorkot Road—Khanewal line was opened in sections between 1895 and 1900; Shahdara was linked to Sangla Hill in 1907; the Malakwal—Shorkot Road line was opened in 1903 and that from Shorkot Road to Chichoki Mallian in 1911. Since then the colonies have had little to complain of in the way of facilities except when a bumper harvest has overstrained the demand for wagons.

The Delhi-Ambala-Kalka Railway Company was not a State concern but a public company which opened its line in 1891. The Southern Punjab was another company which started in 1895 and opened its first line, Delhi—Bhatinda—Samasata, in 1897; it has since brought its line to Lahore. Other but smaller lines are the Hoshiarpur Doab, opened in 1915, the Amritsar-Patti opened in 1906, the Mandra-Bhaun in 1915 and the Sialkot-Narowal in the same year. In addition the Darbars of Patiala, Jind, Maler Kotla, Bahawalpur and Kashmir have financed lines which possess value to the Punjab outside State borders.

The Indus Valley line between Rawalpindi and Multan was built for strategic purposes and has only recently developed into one of economic importance. It is interesting to note that the first line from Lahore to Multan was laid through a desert in which local traffic was negligible; but the construction of great canals has caused such a large increase of goods traffic that much remodelling and enlarging has had to be carried out. It may be assumed that the great colonies would never have been a financial success without the railways to serve their needs, and the same may be said of the railways in regard to irrigation works. The two are complementary. Such a sudden increase in agricultural production as followed the opening of the great canals would have resulted in disaster if the only markets had been local ones, and the fact that the flow of commodities was originally to the sea

shows that markets within India were at the time unable to absorb all that was offered.

The great railway system of the Punjab has been moulded by two outstanding features: the great rivers, running south-west with their broad sandy beds and shifting currents, encouraged the builders to lay the lines roughly parallel to them towards Multan, so as to reduce the number of expensive bridges; but military considerations required lines crossing these, running north-west to the frontier.

The result is an irregular pattern but seventy years planning and construction of the great railway engineers have given the province a network which leaves very few places more than 25 miles from a line. The 660 stations serve on the average 50 villages apiece and their popularity and economic importance will be clear from a few figures. Those for passengers reflect the capacity of the people to spend money on travelling; they bear little relation to the growth of population or to the growing length of the railway system. In 1901 the total number of passengers carried was a little over 20 millions; by 1925-6 this had risen to over 87 millions; the figure seems to have reached its peak by 1928-29, and since then the depression has resulted in a marked decrease. The chief causes for the enormous increase seem to have been the extensions of railway facilities and of irrigation with its accompanying increase of annual wealth produced from the soil. Subsidiary causes seem to be the spread of education, the growth of the large towns and to a less extent the development of industries. Unfortunately it has to be admitted that the litigious character of the people is responsible for much travelling to and from the courts.

The goods traffic has, of course, a more direct bearing on economic conditions; the bulk of the goods carried consists of the produce of the soil, and the remainder is largely composed of goods brought in payment therefor. Wheat is the most important commodity, but gram, pulses, cotton, etc., are considerable items. The Agent of the North Western Railway informed the Royal Commission on Agriculture that traffic to Karachi tended to increase, but was subject to violent fluctuations; that cotton is rapidly challenging wheat in importance; that the commerce in cotton is growing with the extension of irrigation, and that the external demand for the produce of the Punjab is the main factor in rail-borne traffic.

Perhaps few things are more striking to an observer than the general ignorance and almost complete indifference amongst the growers as to the ultimate buyers of Punjab produce and the ultimate uses to which it is devoted. An intelligent producer should want to know who uses his produce, what he uses it for,

whether his produce is as suitable for the object as he can make it or whether he could get a better market by growing a different type, and whether he has rivals in the same market who are striving to oust him by making of it a closer study than he is. The author of this book recommended that a special department should be created to watch over these and similar problems affecting closely the welfare of the cultivators of the province, but although the Punjab Government, always in sympathy with the great mass of its people, approved of the scheme, financial considerations have imposed obstacles in the way of finding funds for such an object. The importance of collecting such information is indicated by the tendency for the export of wheat to decrease, by the pressure from Bombay mill interest to impose heavy protective tariffs on imported cotton cloth which have the effect of driving Japan out of the market as a buyer of raw cotton and by the need for some paying Kharif crop.

To return to the North Western Railway, the capital at charge on commercial lines has increased from over 84 crores in 1923-4 to over 113 crores in 1930-31; interest payments in the latter year were 485 lakhs of rupees and the receipts after deducting running costs and maintenance barely suffice to meet this. In several recent years there have been losses on the year's working, while in a good year the profit may be as high as 3.5 per cent., on the average the figures show that the State is providing valuable amenities at the lowest cost compatible with working charges, and the cry for reductions of freight rates does not appear to be justified by the profits earned.

After 1915, the Great War and its effects prevented the administration from expanding their lines; ten years later conditions seemed to be favourable for a policy of construction on a large scale. Unfortunately, the severe depression has once more brought loss on the working and there is less optimism than in the boom years following the peace. But in 1925 the Railway Board offered to the local government the option of guaranteeing new projects which were not likely to be immediately profitable, and, in order to encourage new construction, agreed to lower the standards required for lines which did not seem likely to pay on the higher standard usually considered necessary. The latter policy was made feasible because the strengthening of main lines, necessitated by heavier engines and faster traffic, rendered available the material which was being replaced. That is to say it became possible to construct new branch lines with second hand material at cheap rates under a guarantee from the local government. This forward policy was facilitated by the decline in the interest rates necessary to attract loans. Before the war, government

had been able to borrow at $3\frac{1}{2}$ per cent.; later the rate rose considerably and borrowing was discouraged. But after 1925 money became cheaper again and although the old rate of $3\frac{1}{2}$ per cent. may not be reached, the present price of money is such as to encourage government in embarking on schemes that promise to be productive at $4\frac{1}{2}$ per cent. Some 36 extensions have been under examination, some such as the Kangra Valley and Shahdara-Narowal, have been completed, others are in various stages of construction or scrutiny. It was hoped to have under construction 800 miles regularly during the year and to open for traffic 300 miles each year; the result would be a number of lines connecting existing lines, which, as has been mentioned, mostly run roughly parallel to the rivers, and, whatever the profits to the railway administration, there should be a great increase in cheap and efficient means of transport of produce to markets with the resultant stimulus to greater production and a general improvement in prosperity.

It has been suggested that the separation of the government of the province from the control of its most vital means of communications is anomalous; the railway system is under the control of the Railway Board which is responsible to the central Legislative Assembly and not to the local legislature, and in theory this separates the latter from responsibility for one of the most important factors in the economic development of the province. The arrangement dates from the time when provinces had no income of their own but competed with each other for the favours of the Government of India; there can be little doubt that as the credit of the central administration stood higher in the money-market than that of the provinces, the system enabled funds for construction to be raised at lower rates of interest than would have been possible for provinces, and therefore greater speed in development has been made possible. It is doubtful if the Punjab could have borrowed 113 crores for its railways at rates which would have made the lines profitable; the profits over a series of years have been so low that it is certain that there would have been none at all if the interest charges had been higher. In the early days the Government of India pressed railway construction forward as a means of famine protection and as an essential to economic development at the risk of heavy direct losses. From 1858 to 1922, the Indian railways were on balance a burden on the taxpayer, the losses during that period exceeding the profits. The prosperous years were interrupted again in 1929-32, involving deficits which would have seriously crippled the provincial finances at a time when these were already proving inadequate to meet current obligations. The fact seems to be that the sum at charge, over 114 crores, is too great for a single province to carry with

safety on a single item ; a fluctuation of one per cent. would be too disturbing a factor in the provincial budget.

The present position whereby the Government of India owns and is responsible for the railway system of the province seems to be the only practicable one in present circumstances ; it has resulted in the construction of 6,000 miles(1) of line at a speed which the province could never have attempted and at a cost which the province could never have approached. That the prosperity of the province has been enormously enhanced by the expansion of railways is beyond all question ; whether provincial control would have resulted in even greater benefit to the people is a matter for speculation ; there is little reason to believe that such would have been the case. The railway authorities are in close touch with the government ; in the interests of their system they are continuously scouring the country in search of projects which promise a profit on construction ; they welcome suggestions from government or its officers and it has yet to be shown that they have rejected a proposal or refused to meet the wishes of the local government in a matter which has been demonstrated to be capable of yielding a net return. The commercial class have, of course, their criticisms on the system, but it must be remembered that this class in the Punjab still lacks the financial resources which would enable it to finance projects which the Government of India refused to sanction.

Critics of the system draw support from European countries which have assisted agriculture by the granting on State railways of favourable rates of freight for certain classes of produce. Belgium(2) helps the farmer with a network of light railways, and is satisfied if these can be run without loss ; they carry the produce from the farm to the final market. In Denmark, the railways are regarded as handmaids to agriculture and not as profit-making concerns ; but they are not worked at a loss. In Germany also great care is taken to promote agricultural interests through the State railways, manures, for instance, being carried at specially low rates. In other countries examples are to be found of similar consideration shown to the premier industry ; improved seed is sometimes carried at rates which are purely nominal in the hope that the increased produce resulting from their use will bring increased traffic to the railway. If it be desired to subsidise agriculture, then a reduction of freights on seed, manure, implements and produce is a suitable and easy method, which can easily be adjusted to encourage improvements by limiting the concession to the particular commodities, seed,

(1) The open mileage of the North Western system is over 7,000, but this includes lines on the frontier, in native States and to Karachi.

(2) *Agricultural Tribunal of Investigation.*

manure, etc., whose use it is desired to foster. In a country like England where agriculture is definitely subordinated to factory industries and where only 20 per cent. of the population lives on the land, or even in villages, it is easy to give sound reasons for affording help to a distressed industry through railway freights at the cost of the general taxpayer who for the most part would not benefit from the concession ; but in India, where the taxpayer is the cultivator, it is not sound policy to subsidise him through freights if he has to be taxed to make up the loss on the working of the railways.

The simple fact is that since 1913 there has been no general increase in freight rates on agricultural produce, so that these rates have borne a decreasing fraction of the value of that produce. The Royal Commission on Agriculture examined the question with great care ; freight rates, it reported, are ordinarily the heaviest single addition to the prime cost of produce exported by rail from the area of production. In a competitive market, they amount to a heavy charge on the gross price ultimately paid for the produce, and, to the cultivator who is selling his commodity at a distance, they amount to a substantial proportion of the price he receives at the place of sale. A comparatively small difference in rates may mean the closing of important markets to the cultivators and the railways. But the Commission wisely refused to accept the charge that the rates were too high. Indian railways already provide cheap rates for manures and the advantage of encouraging the use of artificials in every possible way is so obvious that the North Western Railway may be trusted to do all it can to grant facilities. The Royal Commission recommended that the carriage of fodder from the forests to the cultivator's cattle should be cheapened ; in the Punjab the forests are for the most part situated in areas almost inaccessible to rail, but already and for many years past there has been in force an arrangement whereby the local government can sanction a reduction on the rates for fodder in times of distress, the cost being charged to the province. Careful scrutiny shows that the cultivator has no grievance over fodder rates.

The question whether in the Punjab there should be State aid to agriculture provided through freight concessions turns upon the policy of treating the railway lines as commercial concerns ; if it be decided that these lines must not be worked at a loss (except in times of great emergency) then clearly there is little or no room for further concessions. The North Western Railway must pay its running costs plus interest on capital together with a contribution towards a reserve against loss in bad seasons ; a net profit of 2 to 3 per cent. can hardly be regarded as excessive and the system is run as cheaply as possible

compatible with this. In times of stress, such as famine, concessions are given at the expense of the local government; and it would be for the local government to recoup the railway for any loss it may sustain from the grant of further aid to agriculture. The local government made no complaint to the Royal Commission on Agriculture on the subject and no witness from the province made out a case for any freight reduction.

The province has no tramways for goods traffic. At one time the Communications Board was inclined to recommend the construction of these, but a closer examination has not led to any actual attempt being made. It was found that if the tramways were intended to be feeders to the markets (*mandis*) then ordinary cart transport was cheaper up to twelve miles, and would certainly be more popular. If the distance exceeds twelve miles then the terms on which branch railway lines can be constructed seem to offer a better prospect of commercial success. Moreover, the programme suggested for new railways will, if carried through, leave few places where a tramway of over twelve miles could be profitably constructed. If a tramway is to carry perishable goods, it must be provided with the necessary shelters at both ends and also at such places *en route* as will probably become collecting centres; when the need for facilities for loading and unloading are taken into account then the advantage over a cheap railway begins to decline. Finally, a tramway would not receive from the railway as favourable terms for through traffic as would a branch railway line.

The general result of very careful and prolonged consideration of the case for agricultural tramways is that not one has yet been started, and it is unlikely that any will be laid down unless the railway authorities refuse to meet the wishes of the local government in the matter of branch lines.

It has been stated above that the province would never have been able to raise funds to construct the huge railway system which ministers to its needs; this is well illustrated in the matter of the complementary system of communications by roadway. In 1848 there does not seem to have been a mile of metalled road in existence; there were paved roads in the hills, there is a trace of an old paved road, attributed to the Moghals, by the Marghalla Pass in Rawalpindi district; there were brick pavements in the old towns, but the country at large had only rough earth tracks. The first roads were devised to serve not economic but military ends; the great overpowering consideration with the British government in its early days was the fight against famine, and to this end it seemed wiser to devote all the available funds to irrigation works; the first canals did not pay expenses but their value as famine measures outweighed any loss which provincial

finances suffered from their construction. By the time government should have turned its attention to roadmaking, railways were being introduced and these promised to be of greater benefit in the fight against recurring famines than any length of metalled roads; it must be remembered that at this time the province had no independent revenues, everything came from the central government, and amongst the insatiable demands upon its resources the claim of roads in a distant province occupied a low place. Metalled roads yield no direct profit unless tolls are charged, and tolls in a poor country are apt to keep traffic off them. The economic advantage of roads is not so clear as is that of railways or canals, and unless some charge for their use can be made their cost appears to be entirely unremunerative to the exchequer. As has been mentioned, the first railway in the Punjab was opened in 1862, shortly after the expensive disturbances of the mutiny had subsided, and it was natural to postpone the inauguration of a programme of road construction until the possibilities of the newly introduced railways had been tested. It is difficult now to appreciate the general attitude towards railways in the early days. They were far from being an established success, the prospects of any financial profit were very doubtful and there was not at that time any idea that the country would ever be able to raise the funds or support the running charges of a great railway system. It has been explained that there could not have been the trade and prosperity of to-day without the cheap and efficient methods of distribution provided by the new means of transport; railways had to create their own traffic, they had to stimulate the wealth and prosperity necessary for their own success. A government harassed by internal disorder and embarrassed by financial stringency could not embark upon ambitious schemes for the improvement of communications; fortunately for India, England was at that time pervaded with an immense faith in the profits to be gained from the construction of railway lines and some of this enthusiasm overflowed into the financing of companies for ventures in India. In the case of roads, there was never any question of private enterprise; whatever had to be done had to be done at State expense.

In other countries good roads, where they were to be found, depended upon private expenditure or upon the use of forced labour, *begar* or *corvée*; in France the old type of paved roads which seemed so excellent to the traveller from England were maintained by such labour and the country could not have had the roads without such compulsory work. In England, for several hundred years, the law made the local residents responsible for the repair of roads through their neighbourhood. The system was not legally abolished until 1835; it was assisted by a system

of charging for the use of roads by a levy upon animals and vehicles known as tolls or the turnpike system. Roads were constructed or re-surfaced by private trusts (there were no limited liability companies in those days) which were allowed to charge for their use. Writers of the period describe English roads as a disgrace up to 1825. It was not until about 1827 when Macadam, the deviser of what are now called metalled or macadamised roads, became Surveyor-General of Roads for Great Britain, that great schemes of improvement were embarked upon.

The introduction of macadamised roads into the Punjab was thus not possible until the appearance of the British, and then it was found that apart from a few specially favoured districts there was no suitable metal available. In places where, for military or other urgent reasons, a surfaced road was considered necessary, bricks had to be used and their expense prohibited their wide application. Kankar is found below the surface in many places and provides a surface suitable for light traffic, but it is too soft for heavy traffic whether of motor or of large country carts. Until sometime into the present century, there was no practicable alternative to kankar and accordingly the mileage of metalled roads depended upon the presence or absence of suitable kankar locally; Jullundur and Rohtak, for instance, possessing ample good kankar, had and still have the largest mileage of metalled roads. The Punjab undoubtedly has suffered and will continue to suffer great economic loss owing to the absence of suitable road stone in the plains, and it was not until the railway system had expanded throughout the province, including the foothills, that road metal suitable for heavy traffic became available in quantity. Such stone seems to be chiefly confined to a few places only, the Salt Range, the hills north of Rawalpindi and a few *nullahs* or ravines running out of the foothills at such places as Pathankot and Chandigarh. The hills near Delhi also serve part of the province.

The fact that rural communications are in a backward state is to be ascribed more to physical and historical reasons than to any neglect by government; the former rulers of the country did not know of macadamised roads, they had little suitable material and they lacked the resources, financial and other, necessary for an extensive system.

That the government has not been unmindful of the economic advantages to be gained from good roads may be illustrated by then the fact that in the nine years 1913-14 to 1921-22 there was expended from provincial revenues 78 lakhs on new metalled roads, over 17 lakhs on new unmetalled roads and 155 lakhs on repairs to communications. Last century such expenditure would have been not only unthinkable, but impossible. It was not until

the beginning of the century that the province was given any financial independence, and it was not until the success of the great Chenab colony had brought prosperity to its finances that such great efforts at development became practicable.

District Boards have in the past done much to improve communications within their boundaries where kankar was available, but with the growing demand for education there has been a tendency to divert funds to that purpose at the cost of neglecting the roads. To co-ordinate policy and arrange for the most economic and beneficial use of available funds there was set up a Board of Communications which has attempted to organise road construction and maintenance upon a rational basis. The 25,000 miles of road in the province have been divided into classes *Arterial*, "arterial," "main" and "other," on the basis of their importance *main road* as communications. Arterial roads link up the important towns, district headquarters, etc. and are maintained by government; they are partly metalled and will in time all be so. Main roads link up the smaller towns, markets, places of pilgrimage, and are maintained by government and local bodies jointly. A portion only is metalled.

In the absence of any direct revenue from roads, the cost of *fuel* maintenance imposes a powerful obstacle to progress; the distance over which stone metal has to be carried from quarry to site, the dry heat which loosens water-binding and the spurts of heavy rain are local features which involve the province in great expense. Experiments in other types of surface are being made but the fact must be faced that the Punjab is not favourably situated in regard to road material, or road maintenance. If the present programme be adhered to, the total annual cost of maintenance will soon be 110 lakhs of rupees, of which 80 lakhs will fall on provincial and 30 lakhs on local funds; this averages about nine annas per head for the population, or Rs. 2-13 annas per family. The ideal would be to raise the cost from the users and not from the public in general and the special taxation in England upon motor vehicles which supports the Road Fund has suggested that some attempt on the same lines should be made here. But the main revenue from motor cars is derived from import duties which go to the Central Government. Petrol tax is also central and the license fees yield a sum of about four lakhs to the province which does not afford appreciable relief to the cost of maintenance. Proposals to tax bullock carts, tongas, etc. have been put forward, but these are chiefly used by the general taxpayer, and to tax them to relieve the taxpayer would leave the latter with much the same burden as before. In South India tolls are levied from vehicles as they used to be at the old turnpikes in England and on some of the big bridges in the Punjab, but these are open to

objection as imposing charges upon free trade ; in Bengal there is a road cess and there seems to be good reason for making a special increase on the local rate for road development in the Punjab. Recently a central road board has been set up with funds obtained from the petrol tax, but this is not likely to effect any serious alteration to the general lack of good roads. It seems clear that provincial revenues will not be able to bear the cost of any considerable increase in the mileage of metalled roads, and, unless District Boards agree to increase the rates, the country must remain without these important aids to trade and commerce. The alternative is to improve the unmetalled or earth roads so as to bear heavier traffic, and this is being attempted.

It is probable that enlightened district boards might find it profitable to their constituents to levy higher rates to pay for metalling more roads. The cost of transport is heavier per maund per mile over an earth or kachcha road than over a metalled one, and where traffic is heavy the metalled road may be cheaper in the end. But one great advantage of the metalled road lies in the greater speed with which traffic can proceed, and speed is not of great importance for the type of agricultural produce which is taken to the Punjab markets ; so that it is of no value to the goods, although it is to the carrier as he can use his carriage over a greater mileage in the same time.

If the province is to continue without a fairly complete road system, there must be considerable hindrance to agricultural development ; the stimulating effect of the large markets afforded by the towns will remain confined to a small area around them, and the intensive production of fruit and vegetables in their neighbourhood will not spread to more distant places. As most of the agricultural land in the province has been inherited by its present holders and will probably continue to be so held, this means that the more enterprising owners in tracts distant from great towns will be penalised on every maund of produce they send to market. For the same reason the towns will suffer from lack of the commodities they could obtain with rapid transit ; the dairy farm grantees in Montgomery and Multan have difficulty in marketing their excellent milk while the people in the nearest towns would be glad to get it if the cost of transport were less prohibitive. Lahore gets its milk supply from a circle of eighteen miles radius, a small quantity only comes from as far as 28 miles ; with a better road system much more milk would be available (1). As the chief towns of the province, as has been already shown, are rapidly increasing, their importance in stimulating intensive cultivation of fruit, vegetables, etc. will grow, but without adequate communications with the surrounding countryside this

(1) *The Milk Supply of Lahore* (Punjab Board of Economic Inquiry, 1930).

will fail to extend far beyond the town limits. If the hope of many industrial enthusiasts be realised and factory towns spring up, the case for better roads will become stronger. It must be remembered that apart from a comparatively few commodities of external trade the chief markets for village produce, surplus to local requirements, are the towns; the greater the demand from the towns the more will the villages flourish and the more marked will be the move towards intensive cultivation. Of the cost of transport of goods to towns the greater part is pure waste, money lost in wear and tear, waste of carts, of cattle and of roads, and both producer and consumer lose from this.

Perhaps, some assistance in developing a more economic road system may be found in the distribution of the cost over a longer time period. Of the initial expenditure on construction part is required for the actual land under the road, part on the earthwork raising it above the surrounding level to protect it against floods and part on the soling or lower coat of metal, leaving the remainder for the wearing coat.

All, except the last named, are more or less permanent and non-recurring, while the wearing coat requires regular renewal. It would seem just therefore to meet the charges on all except the wearing coat from long-term loans, the repayment of which would fall upon those who derive benefit from the road when completed instead of, as at present, paying for these from current revenue derived from payers who may never use the completed road. When the economic need for roads is great and admitted and when the chief obstacle in the way of their construction is the burden on current revenue, there need be little hesitation in placing on posterity the cost of the permanent property which it is to inherit. The same argument applies to large bridges which last for many years without any considerable cost for annual repairs, and their cost may equitably be distributed over the period during which they are likely to prove of value. The Royal Commission on Agriculture stated that "The development of all roads would undoubtedly be much more rapid if the policy of financing a road programme from loans rather than from current revenues were accepted," but it refrained from recommending any new source from which annual maintenance could be financed. There are strong reasons in favour of allocating to road maintenance all the income from import duties on motor vehicles as well as the whole proceeds of taxes on petrol, etc., but it is doubtful whether central revenues will ever again be in a position strong enough to accept this sacrifice. People are accustomed to paying for the use of railway lines and railway transport; they are not accustomed and would resent having to pay for the use of roads. Nature has not been bountiful to the Punjab either in material

or in rainfall or in climate suitable for metalled roads. As a result the province must continue to suffer the heavy annual losses caused by defective road communications or make the financial sacrifice necessary for equipping itself with what it needs.

The most striking geographical feature of the Punjab is the number of great rivers threading their way from their sources in the Himalayas through gently sloping plains towards the Indus near Multan; the name of the province suggests five, but as to which were the five suggested by the name originally is a matter of some doubt; and curiously enough there is still no official agreement as to which are the five which figure in the arms of the province.

Some authorities include the Ghaggar; some omit the Beas and include the Indus; older writers differ but the tendency now is to regard the five tributary rivers of the Indus as the authentic five and to omit the Indus. Actually there are seven great rivers of great economic value to the province and from all there have been cut channels to carry the water on to the thirsty soil. The earliest attempt to make agricultural use of the waters seems to have been that of Firoz Shah in 1351, who dug a canal from the Jumna to irrigate Hissar and some gardens round Delhi. It was reconditioned in the reign of Akbar the Great, and has been reconstructed and redesigned from time to time until it has become what is now known as the Western Jumna canal. Its British history may be said to date from about 1871. Ali Mardan Khan who was one of the many remodelers of the Western Jumna (1626) constructed the next canal from the Ravi in 1633; this, the Hasli canal, later was almost entirely reconstructed as the (Upper) Bari Doab about 1861. It originally brought water to Lahore and it is said that Maharaja Ranjit Singh used it to fill the sacred tank at the Golden Temple, Amritsar. The present canal represents the first attempt of the British to use the rivers for agriculture in the Punjab. Since 1861, progress has been such that the province now possesses the greatest system in the world. When about 1848 the fate of the Punjab was being anxiously discussed between those who favoured its restoration to a Sikh dynasty and those who advocated annexation, the most powerful argument against its incorporation in British India was that it was a poverty-stricken tract which would always be a burden upon the Central Exchequer as it would never be able to pay for its own administration. Against this it was urged that although there would be a drain on the rest of India, this would be less than the cost of defending it against such incursions from the Sikhs as had occurred twice shortly before. At that time the whole province, apart from the submontane tract and the beds (*kachchi*) of the rivers, was almost a waste, covered with rough jungle such as is still to be found in the Sind Sagar desert. The

rainfall in the sub-montane tract is about 35 to 40 inches a year ; but this rapidly declines as the traveller goes south-west, until in the great central area, which is by far the greatest part of the province, it is too small to ripen a crop unaided by artificial means. With the exception of the small inundation channel from the Beas near Mukerian (which just saves that river from the charge of contributing nothing to the irrigation of the province) the great canals are directed to the creation of agriculture in this great central area. Through their instrumentality the once poorest province of India has become the richest agriculturally ; so far from being a source of weakness to the whole, it has for long been a tower of strength. It is not intended here to attempt any account of the system which could be considered adequate. That would need a separate volume if justice were to be done to the great services of the engineers who have struggled against obstacles and fought against difficulties to transform almost uninhabited deserts into flourishing tracts. It would need more than a volume if due credit were to be given to those outstanding men whose originality of mind, boldness of conception and unfaltering courage in the face of every kind of opposition have created the Punjab of to-day. It is a curious commentary on human gratitude that although the names of Firoz Shah and Ali Mardan Khan are known to all, those who designed and constructed the modern great canals are almost forgotten.

Perhaps the economic value of the irrigation system can best be brought home to readers through a few figures. At a time when the Legislative Council sees nothing in the canals but a water rate, and is more keen to air grievances than to admit gratitude it may be well to remember that in 1868-69 the cultivated area of the province was only 20,172,000 acres, of which 5,985,000 was irrigated mostly from wells, and 14,187,000 was unirrigated. Ten years later, in 1878-79, the cultivated area was 23,513,000 acres of which, 7,149,000 was irrigated and 16,375,000 unirrigated.

A few years later, when the great canals were hardly begun the area irrigated by them was only 1,840,000 acres, but by about 1886 there were over five million acres irrigated by wells and private inundation canals and river spills. By 1900 the area irrigated by the department had increased to 5,193,000. By 1917, the total cultivated area was 29,140,000 acres, of which 9,678,000 acres were irrigated by State canals and nearly five million by private means, wells and petty inundations. The unirrigated area was 14,545,000 acres, a figure which points to the gradual change of unirrigated land to land under State canals. By 1921-22 over eleven million acres were irrigated by State canals and this rose to over 13 million acres in 1930 (1). The area

(1) Of which 11 million acres are in British Punjab.

varies with the season ; the area which can be irrigated (which is both cultivated and commanded by canals) is much greater, but the demand for water varies with the rainfall. Part of this land is also commanded by wells or river spill, and the cultivators do not put canal water on to this if it is not required to sow or mature the crop.

Of the area now irrigated by State canals part was formerly under wells ; the latter are much more expensive to maintain and work, and tend to be discarded when canal water becomes available. The result is that in spite of the very large number of new wells sunk in the last sixty years the area irrigated from this source has dropped from nearly six million to four million acres. A further area was formerly under indigenous "cuts" which inundated the land on the river banks during floods ; this area also has declined as the more efficient method of securing the necessary moisture has become available. A further area was formerly under more ambitious efforts than the ordinary cut, namely, the private inundation canals without regulators which spilled the water in an irregular and wasteful manner over considerable tracts ; here again the controlled system with weir and a properly regulated supply has proved more popular, so that while part of the area irrigated may previously have received water from canals, it now receives a carefully organised watering as required. But the greater part of the area under State canals was previously dependent upon rainfall, and of this again a very large portion was barren waste. The effect of the State canals is shown by the increase of the cultivated area from 20 to 32 million acres of which the area dependent on rainfall has increased only from 14 to 15 million acres. The great expansion of cultivation in the province in the last sixty years has been chiefly made possible by the construction of the great canal system.

The present irrigation system of the Punjab may thus be divided into three broad classes. In the first canal water has been applied to land, already largely cultivated by old settled inhabitants who relied for the ripening of their crops on the rainfall, eked out occasionally by wells. The loss due to vicissitudes of season were heavy ; in 1922 the Director of Land Records found that in the province as a whole the normal rate of crop failure, mainly due to deficient or unseasonable rainfall, was 21 per cent. Since then irrigation has been widely extended and the average failure is now 16 per cent. In poor years, in districts dependent upon rainfall, it is sometimes as high as 65 per cent. The summer (*kharif*) crop is the heavier sufferer, and the percentage of failure then is 21 per cent., as compared with 14 for the *rabi* or winter crop.

On an acreage of 30 million, the total loss from this cause is enormous, representing to the cultivator a waste of immense

labour, time and expenditure. Were this loss concentrated into one area, it would receive far more attention than it now does. A cautious estimate would put it at roundabout eight to ten crores, a heavy toll to be paid by the Punjab cultivator as the price of seasonal vicissitudes. In these settled areas, the canals have reduced this loss and increased the profit of cultivation; they have made agriculture more safe and given to the worker greater command over his operations, including a greater choice over the crops he may grow. They have further encouraged him to put under the plough much land formerly left waste or cultivated only in seasons of good rainfall. Two outstanding results may be mentioned; formerly the cotton grown was limited to the requirements of the home and little left the village, now a great trade has grown up and the area sown has increased to meet the demand from a wider market. Secondly, the cultivator has been enabled to grow more wheat with the result that this has largely displaced the millets in the daily diet, even of the poorer classes.

The second class of State canals were either cuts designed to inundate large areas on the banks of the rivers during the flood season or were reconstructions or replacements of these by channels with head regulators giving a controlled supply. To a considerable extent the areas served by these had previously been partially cultivated, with the aid of wells, but the new works brought water to large tracts which previously had possessed little settled cultivation. Multan and Muzaffargarh contain examples, and the extension to new areas is illustrated by the Sidhnai colony. As these canals were originally designed to function during the flood seasons only, their main object was to moisten the land for *rabi* (winter) crops and to ripen such summer (*kharif*) crops as could be sown. For the ripening of the winter crops, wells were required and their construction was made a compulsory condition of grants in the areas colonised under these non-perennial canals.

The third class of canal is the great group of colony works designed to bring water to vast areas of desert waste in the great Punjab doabs (or areas between two rivers) in the centre and south-west of the province. In these areas the annual rainfall is usually below 15 inches; in a large part it is below 12 inches and in the south-west it is below 7, in all cases too little to ensure the ripening of crops unaided by wells or other artificial means. Here, irrigation was not designed to assist agriculture and diminish the losses from seasonal vagaries, but to create it where before it did not exist. Scattered about were old wells, and in odd depressions where rain collected a little precarious cultivation had been possible; but there is little exaggeration in describing this great central and south-western area as mainly desert prior to the

inauguration of the great Chenab, Jhelum, Bari Doab and Triple canal projects. The Upper Jhelum differs from the rest inasmuch as it has no weir across the river, this triumph of engineering being skilfully designed to make use of a natural shingle bar; the rest are provided with weirs and the water in the rivers is under strict control. The great colonies made possible by these huge works are the creation of forty years' co-operation between the most skilled body of water engineers in the world, constructive administrators of various services and the hardy and industrious peasant of the Punjab. They enjoy a prosperity such as none of the older settled districts can match and they bear witness to the high standard of perfection both of the irrigation system and of the schemes of colonization. As Lord Curzon remarked they have converted the province from a battlefield of frontier warfare into a home of contented and peaceful peasantry. Upon the human element their effect is no less remarkable; the opportunities for hard work under more responsive conditions than prevail in their home districts have moulded the character of the colonists and developed a sense of pride in their economic well-being that should strengthen the opposition to any tendency towards a lowering of the standard of living.

For the student of rural economics, these great experiments will afford much material for the scientific examination of many theories. It is unfortunate that the standard areas for grants were fixed not with any relation to economic needs of a family but to fit in with a survey unit but, as it happens, the square or rectangle adopted (25 or 27·8 acres) represents about double the area considered by the people as that which can be managed with a single yoke of oxen, and the ordinary holding of a tenant is half a square or rectangle.

Again, the land belonged to the State, and such rights as now exist have been derived directly from the State; although opportunities for purchase are provided in the conditions of the grants, popular opinion seems satisfied with permanent hereditary rights of occupancy. The political theorist who advocates the nationalisation of the land will find here in existence the conditions he demands, although much of his dreams will be dissipated by the reality. The continuous agitation from the State tenants for more and ever more concessions should serve as a warning to those who urge that the abolition of the private landlord will remove all the troubles of agriculture; moreover the dangers of political pressure from a powerful body of State tenants, seeking their own selfish advantage at whatever cost to their less fortunate brethren, should illustrate the need for caution in bringing the Government into too close touch with the people. In the realms of education, public health, medical aid, roads, etc., the

demand for more amenities from the State can be countered by the State's demand for more taxes to meet the new expenditure; but only a part of the Punjab is irrigated, and concessions granted to those who enjoy the benefits are apt to bring less not only to these but to the less fortunate holders of land dependent on rain who may be called upon to make up part of the deficit entailed by granting valuable privileges to the others.

It is unfortunate that the statistics for the areas colonised have not been kept distinct from those of the administrative districts in which they lie, with the result that they are confused with those of sometimes distinctly backward tracts. Some idea of development within the last fifty years may be derived from the following figures for population at different census enumerations:—

<i>District.</i>	1881.	1891.	1901.	1911.	1921.	1931.
Montgomery	348,312	416,599	429,674	481,865	685,690	999,772
Lyallpur ..	53,832	46,926	576,939	824,470	957,881	1,151,351
Multan ..	555,516	634,538	709,297	813,357	839,328	1,174,900
Jhang ..	390,630	402,341	426,225	524,803	570,559	664,863
Shahpur ..	383,652	478,289	488,149	645,001	719,918	821,490
Total ..	1,731,942	1,978,693	2,630,294	3,289,496	3,823,376	4,912,346

The above five districts include the greater part but not the whole of the colonies; the irrigated area sown in a single year is over six million acres, while of the area dependent on rainfall less than one million acres is cultivated and of this over half is in Shahpur where the rainfall is 15 inches a year. Montgomery has slightly over 10 inches, Lyallpur 13, Multan 6·8 and Jhang 10 inches.

The colonies extend into Gujranwala and Sheikhpura with nearly 1½ million acres irrigated, but these also include old settled areas.

For the sake of comparison population figures for two groups of districts may be taken, whose census figures for 1881 were similar; the two old districts of Amritsar and Ferozepore both heavily irrigated now and the four North-western districts of Jhelum, Rawalpindi, Attock and Mianwali:—

			<i>(Figures in thousands).</i>		
			1881.	1931.	
Five colony districts	..	..	1,732	4,912	281·8
Two central districts	..	..	1,641	2,274	139
Four unirrigated districts	..	..	1,671	2,171	130

The last column gives the last figures as a percentage of the first. The figures suggest that irrigation by itself does not lead to any increase of population in excess of that found in unirrigated districts, and that therefore the increase of wealth accruing from irrigation is not offset by increase of population but brings greater welfare per head. Where great areas of waste are brought under the plough, the work of colonization brings both wealth to the colonists and relief to their congested home districts.

It would be difficult to give anything approaching an accurate estimate of the new wealth annually accruing from these great schemes; they have revolutionised the economic position of the Punjab and its people, not only of the colonists but of the great trading classes, and they have brought undreamed of wealth to the professional classes in the large towns. Elsewhere it will be shown how small was the commerce in Punjab products, how little the imports before the great schemes achieved fruition; and the enormous addition to the wealth of the province is reflected in its cultural as well as in its material progress.

In old settled districts a large proportion and in the colonies the whole of the annual yield must be credited to irrigation. In Amritsar, for instance, the Director of Land Records estimates that the outturn of wheat is five maunds ($6\frac{1}{2}$ bushels) more on irrigated than on unirrigated land, although the annual rainfall is on the average over 24 inches. In Lyallpur the same authority estimates the difference at nine maunds (over twelve bushels). But some addition to this should be made for the greater area that fails to mature in unirrigated land. The Irrigation Department gives annually a modest estimate of the value of crops ripened under canal water: in 1928-29 Rs. 46 per acre; in 1929-30 Rs. 41 per acre; in 1930-31 owing to the great depression the figure fell to Rs. 25 per acre. It may be estimated that in a normal year crops worth from Rs. 40 to 50 crores are raised on irrigated lands, of which from Rs. 25 to 33 crores are entirely due to the canals.

The province has been fortunate in that the cost of the canals has been met from loans raised in England at a low rate of interest. In 1932 the British share of the capital expenditure was Rs. 32·5 crores (as compared with Rs. 22·5 crores when the first edition of this book appeared in 1921); the share of the Indian States is Rs. 11·5 crores.

The increasing capital expenditure is not entirely due to new schemes; the object of the engineer is to get the canals into revenue-earning condition as soon as he can in order that interest at least may be earned as soon as possible. Long after the date of the official opening improvements are carried out in order to secure the most efficient distribution of the available supplies of water, and as experience accumulates and research is pressed

forward, the engineers continue their search for the perfect method. As an illustration some figures may be given for the Lower Jhelum canal which was opened in 1901.

	Capital cost (Lakhs).	Area irrigated (acres).	Area Assessed (acres).	Assessment (Lakhs).	Assessment per acre.	Capital cost per acre irrigated.	Percentage of assessment on Capital.
1904-05 ..	142	306,000	306,000	8.3	Rs. 2/11	Rs. 47.5	Rs. 5.8
1909-10	161	731,000	640,000	22.5	3/8	22	14
1914-15 ..	160	821,000	800,000	27.5	3/6	19.4	17
1919-20 ..	170	819,000	814,000	28	3/7	20.6	16
1924-25 ..	189	846,000	833,000	36.6	4/6	22.4	19

(The water rates were raised in 1924.)

The assessment depends upon the crops grown; crops are grouped into classes, fodders, cereals, etc., and the rates charged vary with the group into which a crop is included. The average rate is thus dependent upon the type of crops grown, fodders are lightly assessed, sugarcane and cotton bear a higher charge. The figures above suggest that the expenditure upon improvements, which continues steadily, enables a larger area to be brought under irrigation without decreasing the value of the canal as a productive work, and without adding to the capital expenditure per acre irrigated. The Lower Jhelum is a colony canal, but the steady progress of irrigation in old settled districts, this time at the expense of cultivation of land dependent on rain, is equally marked.

The following table gives figures for cultivated area unirrigated and irrigated in three central districts, the first two commanded by the (Upper) Bari Doab and the last by the Sirhind canal.

District—Average area cultivated in thousands of acres.

	1906-1911.		1923-28.		1931.	
	Un-irrigated.	Irrigated.	Un-irrigated.	Irrigated.	Un-irrigated.	Irrigated.
Lahore ..	410	843	254	1,002	183	992
Amritsar..	368	524	258	695	194	753
Ferozepore	1,591	680	1,210	986	1,027	1,195

The figures of progressive reliance on canal irrigation are the more remarkable in the light of the fact that the average rainfall in Lahore is 18 inches and in Amritsar over 24 inches. There are some critics who seem to think that once a canal has been constructed (it is never really completed) there is no further need for a staff of skilled engineers and that all expenditure on improvements should be refused by the legislature.

Of the canals in the province the greater works are productive ; others are primarily protective, that is to say, designed to protect the tract against famine or severe scarcity. On the continuous efficient working of the system millions of people are dependent for the means of subsistence ; the greater part of the area in the colonies has few wells and insufficient rainfall in a normal year to ripen a crop, so that any breakdown which interrupted the flow of water for a lengthy period would bring widespread disaster in its train. To ensure that the canals are kept in good working order and to save millions from the threat of loss of their livelihood if not of actual starvation, there is engaged a highly skilled body of engineers and subordinates, and large sums have yearly to be placed at their disposal to avoid risk. The irrigation system then involves the province in three items of heavy responsibility, the interest charges on the capital sum borrowed, the cost of administration and the cost of maintenance and repair. To cover these there is levied a charge per acre irrigated and matured which is locally known as *abiana* or *water-rate*. As this charge is repeatedly coming under criticism, not always well-informed, it seems desirable to explain the economic aspect. The sums collected as water-rate are so large in the gross that they appear excessive, and critics are apt to assume that there is room for reduction. In order to make the position clear figures are given below for the great productive canals of the province :—

Productive Canals.	1929-30.	1930-31.	1931-32.
1. Capital outlay ..	32,34,31,592	32,78,02,051	33,17,70,723
2. Area irrigated ..	1,11,03,387	1,08,01,107	1,02,46,932
3. Direct receipts ..	4,50,21,699	4,21,16,338	4,00,75,043
4. Working expenses ..	2,44,93,455	2,36,13,580	1,54,23,490
5. Gross profit (3) — (4) ..	2,05,28,244	1,85,02,758	2,46,51,553
6. Interest charges ..	1,24,02,047	1,28,33,756	1,31,70,350
7. Net profit (5) — (6) ..	81,26,197	56,69,002	1,14,81,203
8. Percentage profit on capital outlay ..	2.51	1.73	3.46
9. Cost of working expenses and interest per acre irrigated ..	3.3	3.3	2.8

The non-technical critic is misled by two matters which are not fully understood : indirect receipts and gross profits.

When government has to decide whether it should incur the grave risk of giving sanction to a new project it is necessary to take the widest possible view as to the effect of the project on the people ; the latter are generally poor and unable to bear heavy taxation ; every canal requires expenditure not only of capital but of revenue for interest, establishment, maintenance and repairs, and before according sanction it is necessary for government to see a clear way to meeting these heavy annual charges. When labour was cheap canals could be constructed at a comparatively low figure, but the present century has seen a marked rise in wages of labour, and the cost of construction and therefore of interest and maintenance charges has increased. As will be seen from the figures given above the net receipts to the State are so small that the permanent continuance of any net return at all must occasionally be a matter of doubt. In order to secure the widest view of the advantages to be expected from a new canal, the effect of the work on State revenues is taken into account, and amongst other items the land revenue anticipated from the land irrigated is estimated. It has been explained that in the desert tracts of the province the canals create agriculture where previously practically none existed, so that the revenue from the areas newly brought under cultivation is recognised to be a result of the canal, and in the discussion as to whether a project should or should not be undertaken a convention has grown up whereby half the new land revenue is regarded as indirect receipts which should be regarded as accruing from the project. This is a convention to be considered when any question arises as to whether a project is a source of profit or not to the State. Unfortunately both the Irrigation Department and the Government persist in retaining this figment after the canal is constructed with the result that the receipt by the State (*i.e.*, the people in their corporate capacity) of land revenue is frequently urged as a reason for reducing the water-rate to a figure which would not cover the costs of maintaining the canal. It would clear the air if the figment of indirect receipts disappeared from official statistics as soon as a project was in working order.

The second source of misunderstanding is "gross profits" which is a term applied to receipts after deducting all working expenses except interest on capital. In the case of a company working on its own capital the omission of interest is justified because no interest has to be paid, but in the case of the great irrigation works interest has to be paid, whether the works yield enough revenue or not. There is no justification in treating interest as something apart from other expenses of the canals.

and it would save much confusion if the term gross receipts disappeared from the accounts. Attention would then be concentrated on items (7), (8) and (9) of the above table. Item (7) represents the income which accrues to the public exchequer, a portion of which only is devoted to those members of the population who do not enjoy the advantages of the State monopoly of river water.

He must be a very captious critic who could describe the rate of profit in item (8) as in any way high. It will be noted that the interest charges are below 4 per cent, a figure obtained only by pledging the credit of the Government of India in the money market of London, and certainly unobtainable in India. It is doubtful whether there could be raised in India the capital required for a new project if the maximum dividends obtainable were those in item (8) plus four per cent. and the minimum whatever the provincial legislature might enforce.

Item (9) represents the cost of putting the water into the village outlet; about half is for establishment and half for repairs and maintenance; this cost is the same for all crops so that those which pay a rate lower than three rupees per acre do not repay expenses, but are subsidised by the State.

That the value of land is greatly increased by being irrigated is admitted and it is interesting to note that the cost of the improvement is only about Rs. 30 per acre. A rough estimate of sinking a well would be about one hundred rupees per acre irrigated by it.

The average water-rate is roughly one-twelfth to one-fifteenth of the value of the crop raised; that this is very low is usually admitted; private canal owners in Shahpur charge one-fourth of the gross produce (*chaharmi*) and yet find cultivators willing to pay. The cost of irrigation from wells is not easy to estimate, but a careful calculation⁽¹⁾ suggests that it varies from twenty to forty rupees per acre and the fact that there are millions of acres still under wells suggests that the cultivators regard the cost as worth the result.

In considering water-rates there are certain considerations to be borne in mind. The State has the monopoly of the waters of the Punjab rivers, and it is morally bound to use this monopoly in the interests of the people at large; the physical conditions prevent everyone being benefited directly and only a minority of the owners or cultivators receive irrigation from State canals; the majority have thus a claim against those who benefit and this can best be met by fixing the water-rate high enough to provide a share for those who cannot receive the water. In this connection,

(1) Cf. the series *Farm Accounts in the Punjab* (Punjab Board of Economic Inquiry.) The fact that cultivators in Amritsar with 24 inches of rain in the year put water on to nearly 80 per cent. of their crops shows how light the rate is.

33000
Amritsar
wells
lost

it must be remembered, that the liability for the debt raised for construction has to be borne by everyone whether he holds irrigated land or not.

The subject of the irrigation system cannot be left without mentioning one important geographical feature of the province of great importance. The canals depend upon the supply in the rivers; for this there are three main sources: the immediate rainfall, the rainfall of past months which has sunk into the ground and which is slowly seeping down and the snow on the mountains which represents a store of the winter precipitation. The only rain that counts is of course that which falls into the rivers above the weirs, and except for the Beas and Ravi the catchment area and the snow are situated outside the provincial boundaries, with the result that the Punjab has a very special interest in the Indian States in which the sources and upper reaches of the rivers are situated. For a steady flow into the canals there is needed a continuous drainage from the hills; rainfall which does not sink into the ground causes floods of little value for irrigation, and therefore it is of supreme importance to the future of the province that nothing should be done in the States which would lead to a rapid flow-off of rain; this, in practice, means that every effort must be made to encourage forest conservancy and to discourage wholesale clearances and destruction. Some authorities regard the danger as serious and ascribe the violence of the floods to which the rivers have been subject in recent years to the denudation of the high hills of their forest growth.

The problem presented is mainly political, and as the States concerned have no direct relations with the Punjab Government, the latter is not in a position to press for forest conservancy but must rely upon the good offices of the Government of India. The threat to Punjab prosperity will always be real and the future obviously holds difficulties in store.

The Punjab forests are, of course, catchment areas for the tributaries of the rivers, but their main agricultural value is derived from the grazing they afford and the timber they provide for housing. The Departmental forests, which are the most important, have an area of 6,700 square miles; out of this only 1,167 square miles are closed partially or wholly to grazing, of which again all but 150 square miles is open to grass cutting. In addition to grazing the rightholders derive considerable benefit; they get 78 per cent. of the grass, 81 per cent. of the fire wood and one-seventh of the total outturn of timber. The value of these rights, exercised free, is estimated at over 30 lakhs of rupees annually, and over three million animals are permitted to graze (1).

(1) The number of animals allowed to graze in the forests is twice as many in the Punjab per square mile of forest as in any other province.

Experts are inclined to regard the area under forest as inadequate; owing to colony operations large areas of jungle in the plains are being brought under cultivation, and there is in consequence at the moment a surfeit of firewood and rough timber which has been cleared to make room for the plough. When this present glut is exhausted it is a matter of grave doubt whether there will be a supply of firewood sufficient for all needs; it is more certain that there will not be enough to serve as a substitute for the dung which is now burned instead of being restored to the land as manure.

One great difficulty in obtaining a proper appreciation of the importance of forests to the welfare of the province arises from the fact that most of the forests are situated in the hills away from ordinary cultivation and the towns.

Those who enjoy rights are the villagers adjoining them; the great mass of the people never see one and so fail to understand how their conservancy is linked up with general prosperity. It is difficult to bring home to the cultivator of irrigated land in the plains that his water-supply depends upon the practices of villagers away in the mountains, or to one of the latter that he should restrain his destructive activities in the interests of others hundreds of miles away. Where, as in Hoshiarpur, the evil effects of neglect are obvious to all in the denudation of the Siwaliks and the consequent damage to land below from floods, it may be possible in time to educate public opinion to accept more rigid conservancy; but fifty years of effort in this direction has not hitherto proved encouraging. All that can be hoped for is that the representatives of the people in the legislature will take a long view and will insist unceasingly that everything possible should be done to preserve the catchment areas of the Punjab rivers, both inside and outside the province, from denudation. The whole continued success of the irrigation system and of the prosperity which the Punjab now enjoys depends upon that. If once the Himalayan forests cease to soak up the rainfall and to deliver it again in a steady flow the Punjab will revert to the desert condition of 1850.

This very important chapter deserves a short summary. All who desire to see the Punjab increasing in prosperity and the standard of living of its people rising must appreciate its geographical limitations. A completely landlocked province, its capital 750 miles away from the nearest sea port, surrounded on three sides by lands almost desert, the province undoubtedly lacks many of the advantages which make for wealth. It has no waterways of any appreciable value for goods transport; its plains yield no stone of use as material for roads burdened with heavy traffic, and therefore road material has to bear heavy carriage charges; it has

great rivers, but the rainfall is confined to short seasons only, and unless part of this rain can be stored in the mountain forests, the rivers will be unable to feed the canals through the year.

The greatest single source of wealth to the province, its magnificent irrigation system, depends almost entirely upon the action of governments beyond its boundaries in whose policy the Punjab has no say. It possesses a great railway system and a great canal system, but both are run on such a small margin of profit that they are unable to build up an adequate reserve against future dangers. Both systems owe their origin to loan-capital, on which interest charges, small in percentage, but large in total, have to be met. The prosperity of the railway depends upon the continued efficiency of the canals; the continued efficiency of the canals depends upon factors outside British India. The province is not in a position to face a reverse of fortune; it has no reserves to fall back upon, no industries to which the people could turn if the colonies had to be deserted again, no mineral wealth whose extraction would offer a substitute for agriculture under irrigated conditions. It is a striking and undoubted fact that the Punjab is helpless in the face of any dispute with the States on its Northern border.

It is a further fact that its people are generally ignorant as to the weak link in the chain which binds them to prosperity.

CHAPTER VII

THE TRADE OF THE PUNJAB

Wheat—gram—other grains—cotton—sugarcane—cultivated area and population—growing obstacles to trade—protection—the peasant and the middleman—sacrifice of the peasant.

Sufficient has been said in previous pages to explain why the Punjab could never have enjoyed a great volume of trade with her neighbours prior to 1850; conditions were unfavourable to intensive economic development and to the growth of great commerce. The early histories of the colonies(1) contain many examples of the waste that followed a good harvest which could not be carried to market for lack of adequate means of transport; Lyallpur, for instance, was populated and irrigated before there was any railway near at hand, with the result that the new cultivators despaired of making any profit from their labours and many deserted their holdings and returned to their home districts. It has been made clear that in the dry tracts roads, railways and canals were interdependent; in the cases of railways and canals as both were constructed from loan capital on which heavy interest charges had to be paid there was obvious risk in pushing the progress of one ahead of that of the other.

In the case of the old settled districts, the agriculture was of the self-sufficing type, and there could not be produced a continuing surplus over local requirements unless there were the transport facilities to move this surplus to the consumer.

The great export trade of the province to Bombay and Karachi is, of course, a modern feature; in the earlier Administration Reports, the trade mentioned was with Tibet and Central Asia, and so strong is custom that, although this trade is insignificant in volume compared with that by rail, it still claims a special annual report, while that on rail-borne trade has been abolished in the interests of mistaken economy. It is this unfortunate decision which makes it impracticable to continue the table given in the first edition which is here repeated: —

			IMPORTS.		EXPORTS.	
			Lakhs mds.	Rs. Lakhs.	Lakhs mds.	Rs. Lakhs.
1882-3	..	..	63	710	103	373
1892-3	..	..	122	920	160	694
1902-3	..	..	251	1,546	249	1,150
1911-2	..	..	551	2,984	566	2,688
1919-20	..	..	655	5,287	413	4,405

(1) The word 'colonies' throughout this book refers to the Punjab canal colonies.

(The figures for exports in 1892-3 are the average of three years as those for that year were abnormal.)

The value of exports is that at the point of despatch, and does not include the cost of distribution. The value for imports is the value at the port which therefore includes the cost of transit thereto.

The bulk of the exports consists of the produce of the soil; as the industrial development is as yet insufficiently advanced to support considerable trade, the nature of the export trade will remain much as it is to-day. Wheat is the most important item of export and it is interesting to note that the amount exported does not seem to have increased with the expansion of irrigation in the last twenty-five years. It would seem that internal consumption has absorbed such increase in production as recent years have brought.

Acreage under wheat in the Punjab.

(Thousands of acres).

	1907-1911.	1924-28.	1930-34.
Unirrigated ..	4,313	4,441	4,325
Irrigated ..	4,263	5,002	5,069
Total ..	8,576	9,445	9,394

(The figures are averages of five years).

In the period covered by the above figures, the acreage under irrigated *Rabi* (spring) crops has increased by over two million acres, of which wheat claims less than one half. It will be observed that the increase in total area under wheat is a little over 11 per cent. while the population between 1911 and 1931 increased 20 per cent. The export carried by rail has varied between wide limits thus:—

	Tons.
1908	600,000
1912	1,700,000
1921-22 ..	580,000
1924-25 ..	1,680,000

The factors affecting export within India seem to be the state of the crops in the Punjab and neighbouring provinces; those influencing it from outside are more complex, and they are so important that they should be widely understood (1).

The most important fact about the trade in wheat is the constant demand from consumers; to meet this the millers require a supply on which they can rely year after year. To meet the

(1) The following account is taken from the evidence given to the Royal Commission on Agriculture.

popular taste in flour wheats of different qualities are mixed, so that the millers require not only an assured supply, but an assured supply of all the ingredients of the mixture which is most in demand. To secure their own position they turn to sources which can be guaranteed in most years to meet their indents, and India is not one of these. The vagaries of the monsoon lead to such great differences in the outturn that the surplus available after meeting the local demand at the current rates may sometimes be in excess of the export market and sometimes in deficit. Millers cannot risk a year of deficit and so seek elsewhere the wheat they require. As illustrated above, the quantity available for export may be half one year of what it is in another and it is this uncertainty of supply which militates so seriously against Punjab wheat in the world's market. The quantity of Indian wheat available after meeting local consumption is too small to influence world prices, so that instead of being able to command its own price, it has to conform to price movements influenced by bigger factors. Moreover, in some of the exporting countries the proportion of the total crop available for export is so high as to leave little doubt as to its being lasting; whereas in India internal consumption is so rapidly approaching internal production that millers feel that they will not be able to rely upon Indian supplies for long. Two changes, then, would make for increasing export: a greater supply and a more assured supply. Both should be made possible by the extension of irrigation but, as has been shown, the increase of the irrigated acreage barely keeps pace with the increase of the population, while the unirrigated acreage tends to remain constant.

A minor obstacle to overseas trade in Indian wheat is due to the price quotation; while wheat from other countries is sold per quarter of 480 pounds, that from India is quoted per quarter of 492 pounds. The greater weight is the higher priced and buyers are apt to overlook that the Indian quarter contains the more wheat. In view of the vast areas of land still available in countries in competition with India in the world's wheat market, it is to be feared that the export trade will decrease rather than increase, and that the recent large imports from Australia will become a permanent feature (1). The one fact in favour of Punjab wheat is that it reaches London at a time when no other wheats are coming in and so fills a definite gap in the trade; it is of good

(1) Cf. *Capital* for 11th April 1929.—Import of wheat was the principal contributory to India's adverse balance of trade in February. So small is the margin of wheat production in India in excess of normal domestic requirements that in case of failure of the monsoon, not only is there no balance of wheat in the country for exports, but, as is the case now, large imports are necessary. This season to date, wheat imports total about 800,000 tons representing a sterling value of about £ 8,000,000.

quality for baking and there is nothing in the grain to militate against its sale. But it seems as though the people of the Punjab must be prepared to see Sind capture such demand for export as there may be while they devote themselves to meet the growing internal demand.

If this be correct then two important conclusions follow: the suggestion that wheat elevators should be erected at market towns for bulk handling must be abandoned and the effort to grow wheat suitable for the European palate should be diverted to capture the internal taste.

The figures for the cultivation of gram in thousands of acres are given below, five years' averages being taken as in the case of wheat:—

			1907-11.	1924-28.	1930-34.
Unirrigated	..	..	3,274	3,535	3,430
Irrigated	..	..	655	941	1,030
Total	..	..	3,929	4,476	4,460

The rail-borne trade fluctuates widely; thirty years ago, 200,000 tons a year were handled; this rose to 992,000 tons in 1918-19; in 1924-25 it was 605,000 tons. On the whole the export trade has increased in the last thirty years. In India gram is chiefly used as food for horses and to a less extent cattle; it is exported to England as a much appreciated food for lambs, but it is doubtful whether there is any great prospect for a continuing increase of export. In India gram is also eaten as a human food, in Europe it is not. Its value there is as a substitute for maize when that crop from the Argentine fails. A few years ago the price of gram rose above that of wheat; this was due to a series of shortages in barley, oats, rye and other fodder crops in Europe, and apart from a recurrence of these there is little likelihood of any increase in the export of this pulse. The matter is important as this crop is the second in area and in value in the Punjab. Its future cannot be left contingent on crop failures elsewhere and so must depend upon an increase in popularity as lamb-food. Unfortunately again its prospects are marred by the lack of any assured surplus for export; if consumers could depend upon a supply its export might increase. Of its use in internal trade remarkably little is known and considering the importance of the crop to the province an exhaustive inquiry into the demand for this pulse outside the Punjab should repay the cost. It is somewhat anomalous that four million acres should be devoted to a crop of whose uses so little is known.

What the railway authorities call "other grains" have been carried in markedly greater quantity; the tonnage having increased

from 44,000 tons in 1901 to 659,000 tons in 1924-5. How much of this is barley and how much rice is not easily ascertainable.

The trade in jowar and bajra is declining, the tonnage carried by rail having declined from an average of 175,000 tons at the beginning of the century to about 50,000 or less now.

The figures for area sown are given below, the figures being averages for five years as before:—(thousands of acres).

			1906-10.	1923-27.	1929-33.
<i>Jowar.</i>					
	Irrigated	....	301	188	204
	Unirrigated	..	1,115	806	796
	Total	..	1,416	994	1,000
<i>Bajra.</i>					
	Irrigated	..	208	296	402
	Unirrigated	..	2,452	2,386	2,916
	Total	..	2,660	2,782	3,318

The decline in irrigated jowar is offset by an increase in the same crop cut as fodder (*chari*), but unirrigated *chari* has also declined. The increase in bajra with a decline in rail-borne trade is difficult to explain except on the obvious ground of increased local consumption. So far as trade is concerned these millets afford a gloomy picture.

Maize seems to be declining in popularity; the irrigated area shows no sustained increase while the unirrigated area is declining. Here again the prospects for trade are not bright.

The most bright spot in the trade outlook seems to be cotton. There has been a great increase in the area under irrigation and the rail-borne traffic has reflected this clearly, there having been an almost uninterrupted improvement in tonnage since 1918. During 1925-26 the earnings of the railway from the carriage of cotton actually exceeded those from wheat. The area figures are given as before in thousands of acres, with averages for five years:—

			1906-10.	1923-27.	1929-33.
<i>Cotton.</i>					
	Irrigated	..	932	2,001	2,023
	Unirrigated	..	368	228	151
	Total	..	1,300	2,229	2,174

These figures bring out the well-known fact that much of the new colonised land has been put under long staple cotton; there is very little long staple grown on unirrigated land and the decline here is in local or desi fibre. Of the latter, a considerable portion is still put under the ancient hand gin in the village and used locally; of the American variety practically the whole goes into commerce; it cannot be ginned on the hand machine of the

old type and is sent to ginning factories of which there are now over 350 in the province. Practically the whole of the ginned cotton is baled and exported to Karachi and Bombay, and as the Punjab climate seems to be too dry and otherwise unsuitable for spinning there is little likelihood of this industry being secured for the province although attempts are being made to establish one. As cotton is now one of the chief items in Punjab trade and provides raw material for the largest number of factories in the province, it deserves detailed treatment. The various problems have been carefully examined by the Indian Cotton Committee and by the Royal Commission on Agriculture, and they are continually under further inquiry by the Central Cotton Committee; the literature on the subject has grown to a voluminous extent and attention here will be confined to those general aspects which are of direct economic importance. The subject is of unusual importance to the Punjab as its position as a cotton growing province is threatened both from Sind and from overseas, and as trade in other products has been sacrificed to make room for this crop and as moreover the financial returns from the canals have become increasingly dependent on it, any prospect of deterioration in the present position should receive most anxious consideration (1).

When the Indian Cotton Committee reported, 5.5 per cent. of the area cultivated in the province was under this crop and this represented 6.7 per cent. of the total under cotton in India. Cotton requires a deep soil, which should not be too sandy; the American varieties will not do well if soil and sub-soil are too sandy and porous. It also requires a high temperature during the growing period, and, as frosts are harmful, the mean temperature at flowering time must not be too low. A limiting factor in its growth is its need for an abundant supply of water during the growing period. As American varieties are usually sown from the middle of April onwards, their cultivation is confined to those areas where a plentiful supply is available from that date onwards. This supply must come from the melting snows, there being no rainfall in April, May and June; and this in turn is only available in the western snow-fed canals. The Jumna rises too late to permit of the early irrigation of Americans, and although the Sirhind canal may have sufficient water for sowings it has difficulty in finding sufficient for the ripening period, which corresponds with the time for Rabi sowings. The Upper Bari Doab Canal is in much the same position with the result that American cotton is largely limited to the lands under the five canals fed from the Jhelum and

(1) The chief sources for the discussion on cotton are the Report of the Indian Cotton Committee and of the Royal Commission on Agriculture, Annual Reports of the Punjab Agricultural Department, Mr. Milne's evidence, and reports of the Central Cotton Committee (Bombay).

Chenab rivers. Lahore (Upper Bari Doab) had 10,000 acres, and Ferozepore (Sirhind) 17,000 acres in 1932, the remaining 735,000 acres being under the five linked canals. Amritsar has practically none. The province is thus sharply divided, the eastern half being limited to growing the local (*desi*) varieties until a type has been discovered which will prove successful under their conditions of irrigation. The Western districts divide their allegiance in a rough proportion of 5 *desi* to 7 American. Of the latter, practically the whole and of the *desi* about 90 per cent. is irrigated.

The retention of *desi* in the western canal colonies is largely due to the fact that American requires nearly double the amount of water in September, October and November, and the cultivator cannot spare that for all his cotton without detriment to other crops.

Desi cottons mature earlier than Americans, they are picked from mid-September to mid-November, while the American pickings begin in October and last to mid-December or even later if there have been no harmful frosts. Both types are perennial, and, in places like Mianwali where the standard of cultivation is not high, *desi* plants are left in the ground for two or more years. Americans may even give a bigger yield in their second year, but owing to the susceptibility to insect pests all plants are usually uprooted after picking.

The Indian Cotton Committee found that the yields in the Punjab were lower than in any other province in India except Madras and the Central Provinces; experience shows that this is largely due to bad cultivation which in turn may be due in part to the preparation period being already busy with the wheat harvest. Under skilled guidance at the British Cotton Growing Association Farms and those at Convillepur and elsewhere, much higher yields have been obtained on large acreages.

The value of the lint is apt to be reduced by defective picking; morning pickings are the best but at that time the women are busy with household duties. Then ripe and unripe bolls are picked without due care and mixed together; leaves, etc., are plucked with the bolls. When picked the cotton is thrown on to the ground where it collects sand. The Cotton Committee stated that the loss resulting from bad methods in picking must be considerable but a premium cannot be obtained for clean cotton sufficiently high to make it worth while to produce it.

If cultivation is insufficient and picking defective, conditions of marketing and ginning are worse.

The Indian Cotton Committee has much to say on this: the cultivator sells his produce to the village bania, to whom he is, as a rule, under financial obligations, and who purchases it at a price much below that to which the cultivator is entitled at the

current market rate. It is a common practice for the bania to buy the standing crop below the prevailing rate. The small lots purchased are mixed by the bania indiscriminately and sold first to bigger dealers and then to exporting firms or to ginners. The cultivator is heavily handicapped in securing an adequate price for his produce by the number of hands through which it passes. He would be more likely to obtain a fair price if the number of middlemen could be reduced, and if he could be brought more directly in touch with the larger buyers....He is frequently cheated in the matter of the weight of his cotton by the village banias and the ginning factory owners....A fruitful source of loss to the cultivator would be removed if some uniform system of weights could be adopted. There is no doubt that the present lack of system offers great opportunities for cheating him, of which many dealers and others are not slow to avail themselves.

The Bombay weight is the Khandi of 784 pounds of lint, the Punjab weight is the maund of 82 $\frac{2}{7}$ pounds, but the weights at ginning factories are in hundredweights, quarters and pounds and not in maunds at all.

But, the Committee proceed, the practices for which the cultivator and village bania are responsible are of minor importance compared with those which are carried on in ginning and pressing factories. It has been definitely established that in a large number of these, watering takes place, though there has been considerable improvement in this respect in recent years. Cotton is mixed with waste imported from mills specifically for this purpose. Cotton damaged by rain is mixed with good cotton. Short staple or inferior cotton is often imported from places hundreds of miles away to be mixed with cotton which has a better reputation or commands a higher price. The existence of malpractices in ginneries and presses must have a very considerable effect on the price which the cultivator obtains for his produce (1).

The Indian Central Committee made inquiry into the conditions in the canal colonies where both American and *desi* are grown side by side and found that mixing by the cultivator is negligible and that the two varieties are marketed separately but mixed deliberately at the ginning factories. The grower of cotton cannot be held responsible for the serious deterioration due to mixing. The Report of the Indian Cotton Committee quoted above led to legislation; the Cotton Transport Act is not effective where the two varieties are grown in the same tract, so a Cotton Ginning and Pressing Factories Act was passed in 1925 to check malpractices.

(1) Cf. Annual Report of Agricultural Department for 1923: In 1922 the great rise of price of cottons during the cotton selling season and the difference in price between *desi* and American led to much adulteration of American with *desi*.

The existence of malpractices in ginneries and presses must have a considerable effect on the price which cultivator obtains for his

Recently the Punjab Board of Economic Inquiry has published the result of an investigation by Mr. L. R. Dawar into "Market Practices in the Punjab" under the supervision of the present writer, and it is hoped that this will lead to the enactment and enforcement of a Cotton Markets Act. Cotton ranks first in India's exports of raw produce and complaints of quality are more common about this than about any other commodity. The Indian Central Cotton Committee are doing much good work but they are hampered by two important factors,—the ignorance and lack of organisation amongst the growers and the inability of the more honourable dealers, of whom there are many, to enforce honest practices upon their less particular colleagues.

That the Punjab should benefit greatly by better treatment of cotton from the preparatory stage to the spinner seems clear, but it will lose if its rivals achieve a higher standard. The well-known type 4F. was given out for cultivation by Mr. David Milne, C.I.E., in 1913. There had been previous attempts to introduce Americans in 1853, 1876 and 1902, and the single plant of 1908 from which Mr. Milne grew his great success probably was an offshoot of one of these. Since 1913, the Department of Agriculture has sent out several other types, both American and Indian, which are great improvements on the old seed, and research still proceeds without interruption. In its very early stages the type 4F. sold at a premium of Rs. 3-8 to Rs. 5 per maund over *desi*, later this rose to Rs. 8; assuming seven maunds unginced cotton (*kapas*) per acre the gain from the long staple varieties was considerable. The improved Indian cottons have also brought better prices per acre than the old mixture. At Convillpur, an excellently managed farm in Montgomery, 500 acres of a type 285F. brought in Rs. 15,000 more than a similar area under 4F. The British Cotton Growing Farm at Khanewal, under the expert control of Mr. W. Roberts, C.I.E., in one year obtained Rs. 352 gross per acre under 285 F., Rs. 319 per acre under 4 F., and Rs. 294 per acre under an Indian improved type known as Mollisoni. The outturn was about 14 maunds per acre, which is considerably higher than that obtained on the less well cultivated lands of neighbouring growers. The figures for value gross, of course, depend upon the rate obtained for raw cotton. It is clear that the Punjab, if properly cultivated, could supply from the same area a greatly increased output of cotton; it is not so clear that it could find a profitable market for it. On the other hand, it seems doubtful if the province will not have to face almost insuperable difficulties if it is to retain a profitable export trade. The great impetus to the growing of improved types came from the high prices ruling after, and as a consequence of, the war. An enormous demand for cotton for explosives had grown up and the

world stocks were depleted when peace came so that the high prices continued for some years. The demand for cotton from America led to attempts being made to grow the American type elsewhere, but the same forces were at work in the United States and their output increased until it became in excess of the demand; where American types grown in India come into competition with those grown in the States, it is probable that buyers will prefer the latter, and some authorities would advise growers to revert to the Indian types. Then English spinners have grown accustomed to the American bale which has a less density than the Indian; American marketing methods are more advanced than Indian and they provide for a continuous supply throughout the year, whereas the Indian cotton is all put on to the market within a short period.

Yet another factor militating against the prosperity of the Punjab cotton trade is the selfishness of the Bombay mill interests; these largely financed a movement to boycott Lancashire cotton goods in order to stimulate the demand for their own but having now got a heavy import duty imposed on cloth they are buying raw cotton from the Sudan, Egypt and even America. A more enlightened policy would have avoided injuring growers in favour of manufacturers; but in view of the need for an export trade in raw cotton all protective measures in favour of the finished article alone must do great harm. The area under cotton in India has risen from twelve to fifteen million acres in twenty years; of this total the Punjab has two million acres. Owing to the lack of spinning mills in the province its cotton has to meet carriage charges before it can compete in price in the Bombay market; the lead (Lahore to Bombay 1,250 miles, or Karachi 750 miles and then by sea) is an important item, and in the future cotton grown under the Sukker Canals in Sind will be able to compete in the same markets with a smaller charge for carriage. The great post-war boom in cotton is long over; artificial silks made from wood fibre are growing in popularity, and unless new uses are found for cotton there is likely to be a severe setback owing to over production. Thus, the most promising trade in the Punjab has a future full of doubt and difficulties, and its representatives in the new Legislatures will have to struggle hard to save it from being injured by policies dictated in the interests of a small body of millowners.

The position of sugarcane provides striking contrast to that of cotton, for there seems to be no need for the province to export sugar, and present efforts are directed to capturing the home market from importers. The area under this crop has been greatly increased by the introduction of new types of cane giving a much greater yield; average figures as before for five years

in thousands of acres :—

		1906-10.	1923-27.	1929-33.
<i>Cane.</i>				
Irrigated	.. ..	287	359	375
Unirrigated	.. ..	78	84	71
Total	.. ..	<u>365</u>	<u>443</u>	<u>446</u>

The distribution of this crop over the province is patchy as if the cultivators had not yet become used to the new conditions ; or it may be that the heavy loamy soil required is not general. The old Punjab types yield about 30 maunds of *gur* per acre, while some of the new Coimbatore varieties yield double this in a normal season and as much as 100 maunds under favourable circumstances. At the experimental farm at Hadapsar, near Poona, very high yields have been obtained, but the method is not suitable for the Punjab. Outturns in India generally are low ; they were found by the Sugar Committee to be one-third of that of Cuba, one-sixth that of Java and one-seventh that of Hawaii ; as the area under cane in India is nearly half that of the world, the fact that India is so great an importer of sugar indicates how backward the methods of cultivation are. Other countries, however, have not the same opportunity for increasing their acreage and outturn as India ; the Punjab has 15 per cent. of the Indian acreage and its opportunity for a profitable trade is great though its climate may stand in its way.

The chief requisites are the adoption of better methods of cultivation and the spread of the new Coimbatore canes ; the extension of cultivation may be impossible under the conditions of water supply in the canals, and more especially of the scarcity and dearness of labour in the colonies. So long as American cotton retains its popularity the ordinary cultivator will require for this more water than is compatible with a larger cane area. Indeed, it would seem that any considerable increase under cane can only be obtained by decreasing that under cotton. But the question of area is of far less importance than cultivation and type. If all the area produced as much as the best, the province would no longer need to import *gur* or sugar, and experts seem to think that even with present methods of cultivation a great increase of yield is obtainable from using new types of cane alone.

It seems clear that the province could be self-supporting in the matter of cane, whether it ever will be self-supporting in the matter of sugar is a problem more for industrialists than economists. A heavy protective duty may encourage manufacture, but the province is outside the tropics and so not well suited to grow tropical canes. The advocates of protection may point to the fact that with few exceptions countries growing cane protect their

sugar industry. Java is one exception and relies upon spending a large sum annually upon scientific research with the result that it can beat its competitors without protection. Other arguments of local importance are that cane-growing provides employment for the family nearly all the year round, that this labour is really invested in a crop which pays for it at the end of a year so that the sum comes as a bounty on industry, and that if a great sugar industry springs up both agriculturists and industrialists should benefit.

There is one matter to which attention may be drawn and that is although India is one of the largest free-trade areas in the world, its politicians have shown a strong desire for protection as a policy irrespective of whether there is anything to protect. The chief competitor in the new industry of sugar-making will be the United Provinces, and it remains to be seen whether the general unanimity in favour of internal free trade will give way to a claim for protection of the Punjab against its neighbour.

In the foregoing pages the trade of the province has been discussed with the acreage under the chief crops as a basis; the striking fact stands out that the export trade in wheat is being lost while that of cotton is threatened. It is unfortunate that the statistics for rail-borne trade are not available for comparison with crop areas and for information as to imports; without accurate statistics Government is blind and is unable to measure the extent to which the prosperity of the province has declined. That the view taken is not too pessimistic seems to be supported by the following figures for total acreages under crops in thousands of acres, for five years:—

		1906-07 to 1910-11		1923-24 to 1930-31
		1910-11		1927-28.
<i>Rabi</i>	.. Irrigated	..	6,968	8,663
	Unirrigated	..	9,693	9,637
	Total Rabi	..	16,661	18,300
<i>Kharif</i>	.. Irrigated	..	3,508	5,125
	Unirrigated	..	7,993	6,959
	Total Kharif	..	10,501	12,084
Total sown area		..	27,162	30,384
				31,556

The increase of sown area has been less than 15 per cent. while the growth of population between 1911 and 1931 has been 20 per cent. so that acreage sown per head is declining. This is, however, to a large extent set off by the increase of irrigation from 10,476,000 to 14,860,000 acres, although the unirrigated area has decreased from 17,686,000 to 16,696,000 acres.

If population is overtaking production a decline in export trade is to be expected, but it cannot be viewed with equanimity, especially as the trade is threatened by factors beyond the control of a single province.

The most important obstacle to trade is undoubtedly the change of the Government of India's policy from one of encouraging trade by every means in its power to one of strangling it to please a tiny number of urban malcontents. For many years that Government strove to lighten the burden on the people while embarking upon huge schemes of constructive development which strengthened their economic position. In 1882, all customs duties were abolished, and when the need for increased revenue in 1894 led to their reintroduction they were confined to the small levy of 5 per cent. *ad valorem*. At this level they remained until the war again led to an increase and they were raised to 7½ per cent. in 1916. With the advent of the Reforms of 1920, a new policy set in; it was considered desirable to raise more funds to meet new expenditure and the customs duties were raised to 11 per cent. in 1921. Meanwhile the influence of the strong urban element in the legislature was bringing protection to the front, and the duties have been raised to a height which threatens to destroy their value as revenue-producers (1). It is now admitted by the Finance Member that the duties are too high; they are killing the import trade and thereby the export trade as well. That the responsibility rests with the urban element may be illustrated by three instances: the ban for a period on the export of wheat (2), a trade which as has been shown is faced with difficulties of its own, the protection of steel in favour of a single company in all India whereby all the cultivators were put to greater expense for their implements, and the prohibitive duties on cotton goods which at one time drove the Japanese from the market as buyers of raw cotton. In all these cases the cultivator lost to benefit a small minority.

Unfortunately import duties are not the only handicaps upon the extension of commerce; reference has already been made to malpractices in the markets and here may be quoted the

(1) The figures for Customs Revenue are instructive of the new policy:— 1911-12 Rs. 9,70 lakhs; 1915-16 Rs. 8,81 lakhs; 1916-17 Rs. 12,99 lakhs; 1920-21 Rs. 31,90 lakhs; 1932-33 Rs. 51,95 lakhs. That is to say the change in policy since 1915 has placed an additional burden of 43 crores on the import trade. The Government of India has admitted that the protective legislation has placed a heavy burden on the people.

(2) The ban for a period on the export of wheat was a panic measure pure and simple, quite unjustified by the facts but adopted to placate ignorant fears. The Famine Commission of 1880 definitely rejected the suggestion that the export of food stuffs should be prohibited: "Nothing could justify such a measure except reasonable certainty that the exports would so exhaust the resources of India as a whole as to render them insufficient to supply the wants of the distressed districts. No such result is even probable." This was a decision arrived at by a Committee with all the horrible details of a terrible famine fresh in their minds.

evidence (not printed) given to the Royal Commission on Agriculture by the leading expert on India's economic history, Mr. W. H. Moreland, C.I.E.

"I affirm that ordinarily the peasant gets the worst of the bargain, both when he buys and when he sells.... One most important group of facts will be found in the Report of the Indian Cotton Committee (1919). The malpractices in the cotton trade revealed in that report shocked enlightened India sufficiently to render feasible the drastic special legislation which is now in force.... My point is that these malpractices are not confined to the cotton trade, but are, and long have been, characteristic of Indian commerce, and so long as they continue Good Farming will be checked by bad Business..... In this matter I speak from considerable personal knowledge. Whenever I had occasion to examine the inland trade in agricultural produce, I came across the same features—mis-grading, mis-description, adulteration, false weighing and, occasionally, fraudulent accounting, though from the nature of the case this last item is not easy to detect.... While the system is bad for agriculture as it stands, it is even worse for the better farming which is wanted, because the trade, as now organised, will not pay price for quality, and the peasants are therefore forced to look to weight of yield, to the exclusion of what is often more important, value per unit of weight.....

"The vicious system of internal commerce consists essentially of the exploitation of the peasants, who are usually bound to sell, by men of quicker brains, who for the moment can refuse to buy, and who act in a spirit which has been generated by centuries of such conduct..... This analysis applies also to the peasant as buyer... In regard to imported and protected goods, the peasant has to bear the weight of a heavy town-bred tariff, loaded, of course, by middleman's charges on their enhanced outlay. On the whole then he is worse off as a buyer than as a seller, but he will generally have to sell more than he buys, because he has to pay rent or revenue in cash; speaking generally it seems to me that the present state of internal trade, particularly as it affects interchange between town and country or between one district or province and another, offers a very serious obstacle to the improvement of agriculture."

Mr. Moreland refers to the well-known fact that conditions for the peasant are much improved when the great buying houses send their representatives up-country. The atmosphere of the market is changed: honest commerce, fixed prices, fair grading, true weighing and straightforward settlement represent both the policy and the practice of the big firms, and the effect the presence of their agents brings suggests that these qualities are not features of general internal trade.

A further change, well-known to close observers, is that the peasant, since the Reforms of 1920, has ceased to be what Lord Curzon called "the first and final object of every Viceroy's regard"; one looks, says Mr. Moreland, through recent records in vain for evidence of that union of knowledge and sympathy which ought to characterise the Central Government of a peasant State.

The steadily increasing flow of prosperity that invaded India between 1860 and 1920 was the result of two main factors; the enormous development in the provision of all means of communication, collection and distribution, and the security and peace which encouraged the trading and commercial communities to take advantage of the new facilities. The two main results were the growth of a rich and influential commercial class and the approximation of the prices of Indian produce to world prices. Apart from irrigation it is doubtful whether the outturn per acre has been increased; it is certain that the number of acres sown per head of population has not increased. But what before was burned or ploughed in when harvests were bounteous is now sold, and when harvests fail prices are kept reasonably low by the readiness and cheapness with which supplies can be moved. For centuries India has been cheated of great wealth by lack of efficient means of collection and distribution; when they were provided wealth came; but as selfish interests place obstacle after obstacle in the way of free trade and commerce so must trade and commerce decline and India must to that extent revert to the state in which the years of last century found her.

CHAPTER VIII

THE SOIL OF THE PUNJAB

The natural features of Punjab soil—and their effects—manures—re-action of the cultivators—pressure on the soil—and expansion of cultivation—the sphere of human effort—standard of living and standard of cultivation—lack of initiative—the State and economic development—effect of revenue demand—effect of rents—effect of taxing improvements.

In a province so dependent on agriculture and its subsidiaries as is the Punjab, one of the most important factors affecting its wealth and welfare is the quality of the land and its distribution amongst the people. The greater part of the Punjab consists of the continuation of the great Gangetic plain, which is characterised by a deep sandy alluvial soil extending to a depth of several hundred feet. Over the greater portion, no bottom has been found to the soil by any boring yet made for sub-soil water, so that it is not possible to suggest the real depth to be met with before rock is reached. To the south-east, the Aravalli hills send in spurs to relieve the monotony of the landscape in Gurgaon and Delhi. The great plain is bounded on the north by the sub-montane hills, and to the west by the Pabbi and Salt Range hills; amongst these, the soil is apt to be shallow, the culturable portion being found scattered in small pans, with occasional larger areas; here the soil is intermingled with innumerable stones, whereas outside these limits there is hardly a natural stone to be found in the province.

Roughly parallel to the Himalayas, there is apparently a range of hills stretching from the Jhelum eastwards; for the most part this is submerged below ground level, but peaks crop out near Sargodha and Sangla. Its influence, if any, on the economics of the province is not yet determined.

The upper soil is usually of a light to medium loam which, when dry, appears to be almost pure sand, but it contains fine silt, rich in plant food. Below this upper layer there is in places a layer of limestone nodules, known as kankar, which is apt to interfere with tree growth and sometimes with the absorption of rain-water. Before the advent of the motor vehicle made stronger roads necessary, this kankar was valuable for road metal.

The rainfall varies from torrential extremes in the hills to five or six inches a year in the south-west. In the tract from

Attock along the hills to Ambala and south along the Jumna to Delhi, it amounts on the average to from twenty to thirty inches a year, sufficient, if suitably distributed, to permit of large areas of crops being brought to maturity without any artificial means of irrigation. From this curved tract south and south-west to Multan, everywhere the rainfall decreases in a fairly even scale. The attempt to mature a crop without artificial aid becomes more and more of a gamble, until in the south-western districts there is hardly such a thing as a crop matured by rainfall alone in normal years. Along this geographical scale, the value of artificial irrigation increases as the rainfall diminishes.

One fact of great economic importance about the annual rainfall is that it is distributed into two seasons, the greater portion falling in the monsoon from July to September while a smaller part, from two to five inches, is received from December to February. There are thus two distinct seasons, with two harvests, ripening respectively in the late spring and the autumn.

Mr. David Milne, C.I.E., the late Director of Agriculture, in his evidence before the Royal Commission on Agriculture summed up the facts: the soil is a deep, alluvial sandy loam, deficient in humus but well supplied with the essential mineral constituents, such as lime, phosphates and potash. The reason for deficiency of humus is that the soil temperatures and composition are so favourable to bacterial action that plant refuse is decomposed to its component salts in a remarkably short time. The alluvial soils contain an ample supply of calcium carbonate which is one of the most suitable bases for the work of bacteria, and the temperatures of the soil down to one foot in depth are almost ideal, especially for the nitrogen fixing organisms. The great variations in the day and night temperatures in the province have a strong expanding and contracting effect on the soil particles, tending to weather them, and enable them to recover their fertility after a fallow, especially when the land is well cultivated. The result is that crop after crop can be obtained without manuring. The light and heat of the sun is a wonderful power given free to Punjab cultivators, but which in colder climes has to be paid for in the shape of tillage, manures, etc.

Whether such favourable conditions make for economic progress or stagnation is a matter of controversy; some writers, and at least one Famine Commission, consider that the ease with which human wants can be satisfied in India is one of the causes of her economic backwardness, while most people seem to agree that the poor soil of England, and still more the hostile natural conditions of the most part of Scotland, account in large measure for the tireless industry, the passion for thrift and the great economic successes attained by the people of those countries.

No one who has carefully regarded the poor lands of the Scottish crofters, thirty to fifty acres of hillside with shallow soil and severe climate, can fail to appreciate the fact that a livelihood can only be extorted from those conditions by great effort and persistent industry, which under more favourable circumstances would win wealth and prosperity.

Of the prospects of the Punjab, Mr. Milne had no doubts: "Personally, I feel that the Punjab with its fertile soils, its extensive resources for the supply of irrigation water, its astute and virile peasantry together with the extensive facilities for irrigation, communications, etc., placed at its disposal by government, will, if properly managed, place it in a position in which it can produce crops and put them in the world's market at a cost which most countries will have difficulty in competing with."

The soil contains very little clay, and requires hardly any drainage, except where the natural conditions have been altered by artificial irrigation; it requires little expenditure to bring it under cultivation and to maintain it in bearing capacity. It thus differs from the soil of England, much of which consists of a few inches of earth on chalk or clay or other hard substratum and which needs much drainage to keep it sweet. The English countryside which strikes the traveller as one long beautiful park is the result of three hundred years of loving care and industry; and even then there are great stretches of such poor stuff that no crops can be raised beyond a little grass. In Scotland, of course, the case is much worse, as the line of possible cultivation is only a few feet above sea-level and all above that is bog and heather—the so-called deer forests.

In the Punjab land does not need the constant attention, cleaning and manuring which it requires in England. In Denmark the soil is perhaps worse than the Punjab, being more sandy and swept by sea winds and it has needed all the industry of the Danish farmer and all the resources of science to convert it to its present fertility.

In Belgium there is said to be the worst soil in Europe, so sterile that, after centuries of laborious husbandry, it will not yield a single crop without being manured (1). No region is naturally fertile, and the system of land tenure tends to reduce efficiency; yet the history of Belgian agriculture is a record of the triumph of knowledge and industry over natural conditions. Science and skill have brought prosperity. More manure per acre is put on to the land than in any other country. The success achieved, it is said, is largely due to the provision of facilities for

(1) Rowntree: *Land and Labour: Lessons from Belgium*, p. 148.

education and training in agricultural methods, and to the institution of a co-operative system, which neutralises some of the defects of the conditions of land tenure. The high standard of agricultural education has produced great skill in the selection of seeds and in the use of artificial manures.

Of Spain it is estimated that 10 per cent. is bare rock ; 35 per cent. is naturally unproductive soil, lying at a great height or destitute of water ; 45 per cent. is fairly good land, lying where the communications are difficult, and ill-watered because it has to rely on the rainfall, which is very erratic throughout the interior. The remaining 10 per cent. is good soil advantageously situated. The true sources of the country's wealth are agriculture and pasture, which are those most neglected. The cultivation of the land is left to men who are too poor, as well as too ignorant, to do it justice. The system of tenure is most injurious. The standard of agriculture is bad. Of Greece a large portion is waste, being rocky or marshy ; only about 24 per cent. of Old Greece is cultivable. The methods and implements of agriculture are very primitive, there is little use of manure or scientific rotation of crops. In Thessaly the wooden ploughs used differ little from those of more than 2,000 years ago (1).

Large portions of Japan are absolutely unfitted for anything else than forests, and only one-sixth of the total area is under cultivation ; in Italy, too, the area open to cultivation is but a fraction of the whole, while in Russia vast tracts are infertile (2).

Of Old Serbia one-third was cultivated ; but of the new territories acquired in the Balkan Wars not more than 8 per cent. was cultivated. In Bulgaria the cultivated area amounts to 42 per cent. ; in Roumania it is 60 per cent. (3).

When attention is turned to the Punjab, it is seen that in its soil the province is undoubtedly fortunate ; one-half the total area is already returned as cultivated, and more will be available as the new canal projects are carried to fruition. As soon as the people can be taught to make the best possible use of this almost inexhaustible source of wealth, the prosperity of the country should reach a very high standard. The Department of Agriculture reported in 1924 :

"From the surprisingly great intensity of the cropping which can be carried on here without the addition of manures and with surprisingly little tillage, it is obvious that the soils recover their fertility by natural means much more rapidly than

(1) *Foreign Office Handbook* on Belgium, Spain and Greece ; Also Jebb : *Modern Greece*.

(2) Rowntree states that the proportion of land under cultivation in Belgium is 64 per cent., in Germany 63, in France 65, in England and Wales 73 and in Scotland 25 per cent.

(3) See *Foreign Office Handbooks*.

soils in Britain for example. Important factors in this seem to be that the soil temperatures here are more near the optimum temperatures for the work of soil organisms and that the more arid climate allows less washing of nitrates, etc., beyond the reach of the roots of crops. Other factors are concerned, most of which trace back to the heat of the sun, but the net result obviously is that farmers here are in a comparatively favoured position with regard to competing in the world's markets with their crop products. What is wanted is that science be brought to bear on these natural facilities so that they may be understood and controlled as far as possible to the advantage of the farming community."

On the question of manure, Mr. David Milne, C.I.E., late Director of Agriculture, pointed out that the waste which occurs by burning cow-dung is not as great as is generally supposed. The only loss that takes place is that of organic matter and nitrogen, and obviously the climate, soil and other conditions provide amazingly good facilities for the recovery of these losses and for the general recovery of soil fertility. And Mr. Stewart, the present Director, has shown from rotation experiments at Lyallpur that very much greater financial returns than those ordinarily got can be obtained from the soil without detriment to its fertility even when intensive cropping is practised by following suitable rotations.

The fact that the soil has yielded freely without the expenditure of any considerable amount of capital on manures or improvements may have dulled the peasant to the need for constant attention to these. As the Famine Commission of 1880 stated: "The importance of manuring is known much more widely than its use is practised." Unfortunately in this province so far trials with artificial manures have not been very successful; most give increased outturns but do not repay expenses. Green manuring gives very good results and has been found profitable in the plains wherever used, but its use is neither popular nor widespread. Dung remains the most profitable manure within reach of the cultivator (1); but it is scarce and is made still scarcer by its use for fuel and so the cultivator in his own interests should grow and plough in green manure. To encourage this, irrigation water is given free of charge, but few avail themselves of it.

It is a weakness of human nature that the easy acquisition of wealth restrains the growth of the spirit of enterprise; there seem to be grounds for believing that the natural fertility of the soil, which readily yields a crop to the minimum of labour, is

(1) And is about the only thing of value to agriculture which many cattle give.

responsible in some measure for the backward state of agriculture. Difficulties bring forth industrious men. The greatest skill seems to develop under the greatest hardships. The average human being exerts himself to secure satisfaction of his wants and to the extent required for this satisfaction.

Until the soil of the province shows signs of exhaustion, there will be no full appreciation of that feature of agriculture in old settled countries which consists in putting into the land what is relatively cheap in order to get out from it what is relatively dear. So long as the cultivator can reap a crop without much exertion and without the exercise of much intelligence, he will tend to be satisfied with what nature yields. When nature inclines to refuse her favours until some material in the way of manures and some energy in the way of physical aeration are supplied, the cultivator will begin to look around for fertilisers that will repay their use, and for methods that will yield him profit. The exertion put forth by the cultivator tends to vary inversely with the unaided generosity of nature. Almost everywhere the cultivator tends to look to his land just for a living and not as affording an opportunity for accumulating wealth, and so an easily won income serves to retard progress; while wherever conditions are harder, naturally or otherwise, there is to be found the most painstaking cultivation in the province. The carefully tended plots around the wells in the Sind Sagar Doab or the terraced fields in the hills may be quoted as examples. The Ahir, struggling with the capricious rainfall and sandy soil of Rewari is far more industrious than the ordinary agriculturist in rich Lyallpur. Where rents are high, as in the immediate neighbourhood of big towns, or where holdings are small, the standard of cultivation is found to be better(1).

Experience shows that an improvement in cultural methods a change towards more intensive agriculture seldom comes except as a result of economic pressure. Farmers do not usually expend more capital and more labour on a given area until they are driven to it. The highly intensive system of cultivation in Japan, which is the most characteristic feature of its agriculture, is not due to the natural industry of the Japanese, but to the absence, until within recent years, of any outlet for its rapidly growing population. It was the only alternative to starvation.

(1) The Settlement Reports of the province contain ample evidence, e.g., "cultivation is very good in many charkhari villages where the owners are hard-working and the holdings small" (Gujranwala Tehsil). It is not intended to argue that an all-round increase of rents would lead to an all-round increase of production. High rents form a factor tending towards more intensive methods. They result from the existence of men who are willing and able to adopt these methods and they serve to keep these men working up to a high standard when a reduction might lead to a decline in method.

Rent on
high
cultivation
in hills

Pressure
of improvement

See
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In America, where land has hitherto been plentiful, but labour dear, farmers have preferred to secure a small outturn per acre from a large area to striving after a higher yield from a smaller area. The object of the farmer is always the same, to secure a good income for himself; and, in accordance with the Law of Diminishing Returns, it is easier to secure the same income from a large area extensively cultivated than from a small area intensively cultivated. Where the large area is not available, intensive cultivation is forced upon him unless, as is too often the case in India, the cultivator resigns himself to a low standard of life. Most Punjab peasants have the cattle-power, labour knowledge and leisure to attain a much higher standard than they do. A well-known saying of Arthur Young(1), that the magic of property turns sand into gold, was based on a comparison of the methods of the British tenant farmer with the peasant proprietor of France who had turned the white sand dunes of Dunkirk into fertile fields through their industry. But while the former had probably 150 acres wherefrom to extract his living, the latter had from 25 to 30, and his laborious industry that so appealed to Arthur Young, was forced upon him by the extreme difficulty of his task. It is this painstaking, laborious industry that turns sand into gold. ~~The effect of proprietorship is to secure to the cultivator the full return on his labour; the element that counts is fixity of tenure; ownership is not essential to good cultivation(2).~~

If, as it is here urged, economic pressure be necessary to stimulate the cultivators to improve their methods, it must be expected that the relief from economic pressure will tend to remove this stimulus and so will, to some extent, militate against progress. It has been pointed out in another connection that one of the obstacles to improvement is the difficulty of bringing home to the cultivator a proper realisation of the extent to which the outturn of his fields is a reflection of his own methods and his own exertions. Where, then, the cultivator finds himself in a vastly improved position, in possession of a valuable property, yielding a greatly increased income, without any extra effort on his part, his sense of responsibility for his crops, must be weakened. In the Punjab these conditions have been fulfilled. The effect of the British administration has been to place great wealth in the hands of the cultivating classes. At annexation there seems to have been no recognised sale value for land. In 1862-63 the average price paid by Government was about Rs. 8 per acre. In the five years from 1862-63 to 1866-67 the compensation paid

(1) This greatest of British writers on agriculture was born in 1741 and died in 1820.

(2) Cf. the history of agriculture in England.

for land acquired for public purposes was, on the average, Rs. 13-4-0 per acre. The average for the next five years was Rs. 50-2-0. It continued to rise steadily until 1895-96. Then came the opening of the great Chenab Canal. Wealth came to the province from the new colony and from emigrants abroad and an era of almost unbroken prosperity set in. The price of cultivated land rose from Rs. 59 in 1895-96 to Rs. 252 in 1917-19 and has been over Rs. 400 since, while in the colonies considerable areas have been sold for over one thousand rupees per acre.

At the same time, the demand of the State for revenue was being reduced; the owner's position was being strengthened and markets were being opened up. Until communication with the great seaports was established by railways, prices of produce fluctuated widely. The price of wheat on 1st June 1868 was 19½ seers; a year later it was 13 seers; on 1st June 1871 it was 20-14/16 seers. It fell to 27-5/16 seers in 1877 and two years later it was 14 seers. In remote places like the present Mianwali District, wheat after a good harvest might fall to 40 seers a rupee, that is to say, it was practically unsaleable. Under these circumstances, agriculture was a gamble in prices as well as in rain. But with the opening up of railways, prices became steadier and the average level rose higher than before. The cultivator's income from the sale of his produce was thus raised by influences outside his own control, and it has needed the recent severe slump to awaken him to the need for hard work.

Two other factors came into play, further enhancing the average income. The new canals, irrigating millions of acres, caused a great increase in the total yield; while, in so far as they brought water to tracts previously uncultivated, they led to a great expansion in the area under crops. The great increase in the cultivated area that has taken place in the Punjab in the last fifty years has been almost wholly covered by irrigation. The figures for cultivated area in acres (1) are as follows:—

	Irrigated by canals.	Irrigated from wells, etc.	Unirrigated.	Total cultivated area.
1868-69 ..	1,373,000	4,612,000	14,187,000	20,172,000
1918-19 ..	9,000,000	3,500,000	16,500,000	29,000,000
1930-31 ..	10,239,000	4,575,000	15,451,000	30,265,000

The value of the crops produced by canal irrigation was in 1919 estimated at 55 crores of rupees. The slump in prices reduced this to 49 crores in 1929-30. Most of this comes from

(1) Figures from 1868-69 refer to the old province as then constituted and so the increase is really much greater than would appear. The figures for 1918-19 are rounded. Economists are apt to assume that extension of cultivation involves a decrease in average yield, as the best lands are cultivated first and extensions bring worse land under crops. In the Punjab the new canals have opened up rich virgin soil and accordingly extension of cultivation has increased the average yield. Cf. Moreland: *India at the Death of Akbar*, pp. 115—118.

land which was uncultivated prior to the construction of the canals. The effect of the railways and canals combined is shown in the great increase (it might almost be said in the birth and development) of the export trade. Prior to annexation there was no export of agricultural produce worth mentioning. In 1871-73 the wheat exported was valued at 4 lakhs of rupees, forty years later it was valued at 1,448 lakhs.

The area sown with wheat in the former period was 5.5 million acres, in the latter it was about 9.5 million acres. Thus there has been a great increase in the cultivated area, a much greater increase in the irrigated area, and consequently a marked rise in the average outturn per cultivated acre, and, in addition, a very considerable enhancement in the prices of agricultural produce. The population that shares this wealth, however, has not increased in the same proportion.

The total population for the same area in the present boundaries of the province has been as follows in the years referred to:—

Year.	Population.	Year.	Population.
1868 ..	16,250,000	1901 ..	19,940,000
1881 ..	16,940,000	1911 ..	19,980,000
1891 ..	18,650,000	1921 ..	20,680,000
	1931 ..	23,580,000	

As the figures given for 1868 are probably an underestimate, it may be said that the population has increased about 45 per cent. while cultivation has increased 50 per cent., and the gross value of the produce has risen from roughly 35 crores of rupees a year to not less than 100 crores. Any estimate of the value of agricultural produce must be largely based on surmise; the value to be placed upon wheat stalks (*bhusa*) or gram stalks (*missa bhusa*) or fodder generally presents great difficulty. Green wheat commands a high price near large towns, but this is no index to the value of green wheat in general. Mr. Findlay Shirras in his *Science of Public Finance* placed the value of agricultural produce of the Punjab and Delhi at Rs. 226 crores. In 1918 the Annual Land Revenue Report put the gross value at Rs. 25 per acre or Rs. 72 crores in all, a cautious underestimate. In 1921 the author put his estimate as Rs. 150 crores. In 1923 the Director of Land Records estimated the value of the ten chief crops at Rs. 78.4 crores, and this seems to have been grain only, fodders being omitted. The Irrigation Department ventures to publish estimates of the crops raised by irrigation and the effect of prices is clearly brought out by the values ascribed to an acre of wheat in four successive years:—

	Rs.		Rs.
1919-20 ..	81	1921-22 ..	52
1920-21 ..	67	1922-23 ..	49

The pressure on the soil seems to have declined for the total population per 100 cultivated acres decreased from 83 in 1868 to 76.4 in 1911 and rose to 78.6 by 1931; while the number of agriculturists per 100 cultivated acres has declined from 46 to 43. (In the Census Report of 1868 it is mentioned that between 1855 and 1868 the population increased 11.5 per cent. while cultivation increased 31.6 per cent.) The average value of gross produce per head of population has thus risen from rather less than Rs. 22 to not less than Rs. 60, and it is certainly safe to say that the gross earnings of an agricultural family have trebled.

This great increase of income has, in the main, resulted from the acts of the British administration. It is very doubtful if any very appreciable proportion is due to the cultivator's own exertions although undoubtedly improvements are now being effected. There appears to be little evidence that he has increased the intensity of his cultivation to a degree that would affect the general prosperity. Not only has the number of workers on the same area of land declined but there seems to have been a decrease of bullocks per 100 acres cultivated. Some Assessment Reports actually mention a decrease in the efficiency of cultivation(1), and if the argument as to the effects of economic pressure is correct, this is to be expected. The cultivators find their income mounting up without extra exertion on their part; a few began to find that it was not necessary to work at all, for the area given to tenants increased and owners began to mortgage their property for larger and larger sums and thus to exploit the rising value of their land.

The Punjab thus presents certain economic features of great interest. The administration has introduced improvements of great magnitude, resulting in a marked and rapid increase of wealth to the people, who, to this extent, have been relieved of the pressure of their former poverty. These measures have given a value to land which has soared to unprecedented heights. This rise, as will be seen presently, is in part due to the increase in the cash value of the net rental obtainable, and in part to the great amount of new wealth, resulting from the measures referred to, seeking investment and being sunk in land in consequence of the backward industrial and commercial state of the province. The progressive rise in the value of land has attracted the usurer and, indeed, anyone possessed of fluid capital; for it afforded the proprietor a basis for credit, and the new facility for borrowing.

(1) Cf. for instance that on the Gujranwala Tehsil, p. 17. Here the number of bulls and bullocks declined from 153 per 1,000 cultivated acres in 1892 to 106 in 1909. It is, of course, true that there has been some improvement in certain tracts but the argument is that the gross result is, beyond all dispute, in largest measure due to the action of Government in constructing the great canals and railways.

*Compulsion among money and
to own land is also no hardship
for the rise in the price
of land.*

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offered to a class to whom credit had hitherto been barred, proved too insidious a temptation to resist. As has happened with peasant proprietors in other countries, the rising value of land has led directly to a steady increase in the total mortgage debt. Credit is a powerful agency for good in the hands of those who know how to use it, but it is a danger to those who do not understand it; and, in the Punjab as elsewhere, the number of the latter far exceeds that of the former. The rise in the price of land and its effects, including the abuse of rural credit, will be dealt with at length later. To complete the present discussion, it seems necessary to look ahead and to try to foresee what the play of economic forces will result in.

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Hitherto, the natural expansion of the population has been more than amply provided for by the effect of the great canals in throwing vast stretches of barren waste open to cultivation. How much further this process can go on a business basis is not yet clear. The most carefully worked-out schemes, designed to cover expenses of maintenance, repair, establishment and interest on capital may be converted into financial disasters by a thoughtless vote in Council and Government must in the future feel less confident in embarking on great schemes. The Sutlej Valley project is now approaching fruition and there are several possible plans for storage in view. It is thus unlikely that the increase of population alone will impel agriculturists to resort to improved methods of cultivation. There is, however, another factor which may serve as a stimulus to further effort and this is the growing desire for a higher standard of living. There is no doubt whatever that in the last thirty or forty years a great change in this respect has come over the province. The standard of living has risen, the people are better fed and much better clothed than formerly and enjoy more petty luxuries. In few ways is this better illustrated than in the great change in the goods offered for sale in village shops. In food, wheat is replacing inferior grains such as millet (bajra); the buffalo, once a sign of a prosperous household, is almost ousting the cow in favour, and more meat is being consumed. Morally, the progress is less easily determined, but there is a steady increase in the number of pupils attending schools and more reading matter of every description is being produced. It is probable that in a considerable number of cases the desire for a higher standard of living has been met not altogether by the increase in the holding nor wholly by the increase in the outturn nor yet by the higher price obtained for produce but in some measure by the fatal facilities for borrowing. Many crores of rupees have changed hands through sales and mortgages of land and a proportion of this has been used to meet a higher, or a more extravagant, standard of living than the income permitted. The

*pressure has been towards higher
standards with impell. agr. to
improved means of cultivation*

landowners are to this extent living on their capital and to secure a more healthy condition of affairs it is necessary that this abuse should be stopped. Indeed the recent collapse of prices has brought a large number of them to a critical position(1).

If expenditure can be confined to income or to what is productive, the desire for better living should serve as a stimulus to economic development. There are five factors, so closely interdependent, that any change in one must result in a change in another. These are the population, the cultivated area, the production on this area, the standard of living and migration. If an increase in population is not compensated for by a corresponding increase in the cultivated area, then the people must either produce more from that area, by improving their methods of cultivation; or they must reduce their standard of living; or they must send their surplus numbers to industries, or other callings or to other countries. The present low standard of living in India is in part due to population outstripping production; there was no sale for produce in excess of local demand and hence there was a strong tendency to sow what was hoped would prove sufficient for local needs and no more; even when there was ample land available for the extension of cultivation there was no incentive to put it under the plough. There was no urge to improve the outturn per acre and hence no seeking for ways to do it. The standard of cultivation became customary and the increase of population seems to have left it unaffected and to have tended instead to reduce the standard of living. Economic pressure in India has not everywhere led to the display of originality in discovery or invention; indeed the agricultural implements unearthed at Taxila differ little from those in use to-day; no one can say when the present type of wooden Persian wheel was introduced or when any of the crops such as sugarcane first appeared. The invaders of India do not seem to have been better cultivators than those they found here and they are not credited with the introduction of any improvements in crops, cultivation or implements; the same remark applies to those who filtered into India on more peaceful missions. England has been more lucky for many of her improvements in agriculture and industry were introduced by foreigners. To quote Professor Alfred Marshall:—"England's first great undertaking, that of drainage on a large scale, was carried out for her by Dutchmen; the first English iron cannons had been cast in Sussex by a

(1) Mr. Darling's enquiries showed that out of 43,000 proprietors, who were members of co-operative societies, only 17 per cent. were free from debt. The tendency to make a wasteful use of the enhanced credit deserves close attention, for unless checked it will gather strength and once more involve serious dangers. The Banking Inquiry Committee found that among 112,000 members, only 13 per cent. were free of debt.

Foreign invasion brought Englishmen
to the Punjab.

Frenchman; and lessons from French and Italians, Dutch and Flemings, Germans and Swedes had been required to equip Englishmen as workers in cloth and silk, pottery and paper, as miners and metallurgists"(1). The early Kings, to increase their revenue and to educate their people, favoured the settlement of foreign artisans among them and this educative policy was truly constructive. It was by their aid that England began to be able to sell manufactured stuffs abroad; and it was these and others who later sought refuge from persecution, coming from many parts of Europe, who introduced that astonishing variety of manufacturing processes which became characteristic of the country. The English improved on their teachers, and, later on, developed a conspicuous talent for invention.

The economic pressure on the land in England was never so severe as it is in Japan, but the latter country preserved her strict isolation until compelled by armed force to admit foreign trade; and it was still later that her Government adopted the policy of bureaucratic stimulation of industries, and began to invite foreign experts to teach Western methods, and to send agents abroad to learn whatever could be adapted to Japanese conditions.

Up to the present, the Japanese have shown a considerably greater faculty for imitation than for invention; they have copied old, rather than discovered new, processes; and it would seem that India may show the same characteristics. The conclusion to be drawn would seem to be that, if economic pressure is to lead to progressive development of agriculture or industries, it must be supplemented by extraneous teaching and example. There should be no hesitation in calling in experts from outside, and a too sensitive patriotism that would place race and birth before other qualities required for ensuring a steady enhancement of the general welfare is to be deprecated. The position at present is peculiar. Most people desire a widespread increase of prosperity. Hitherto, such an increase has been directly due to the efforts of the British administration, rather than to any conspicuous change in the exertion made by the people although these have responded readily to the great opportunities opened out for them, such as the Punjab colonies. The success of these efforts has resulted in mitigating the pressure of poverty, and so removing a stimulus to the improvement of methods of production. The effect of administrative measures in diminishing the stimulus to exertion may be offset by a desire for a higher standard of living; but there are reasons for believing that this desire has, in the past, failed to maintain itself in times of stress, and that, in the present, it may seek satisfaction in living on capital and so mortgaging the future.

(1) *Industry and Trade*, pp. 40-41.

This last named tendency has been only partially checked by the Land Alienation Act; and the Usurious Loans Act has so far proved insufficient to fill the gap. Much good is being done by the Co-operative movement and more may be expected but the State must take a hand in helping the economic uplift by the people. In the past it has placed wealth in the hands of many who were merely fodder for the money-lender and has hesitated to stamp out practices which were leading the people to poverty and debt. A rigorous regulation of money-lending is a public need which has taken partial shape in the Regulation of Accounts Act, but the courts in the province do not support the efforts of government in the way courts in England do. There the dishonest or rapacious money-lender finds no sympathy from the judges who in open court express their pleasure in being in a position to use the law against them.

But with the money-lender confined to his legitimate business, there would still be need for positive action and this is being taken in the development of research and the spread of education, by the excellent type of village school and curriculum recently introduced and by other measures designed to awaken life in the village.

A few observations may be offered on possible criticisms. It may be objected that the above sketch contemplates an increase of officials and of official control and that there is already enough of both in the province. In reply it may be pointed out that, according to the return of occupations in the last census, public servants (including apparently the army) and their dependents formed 1.73 per cent. of the population, while the proportion for beggars was 2.42 per cent. The province is thus far more beggar-ridden than official-ridden. Further, it may be pointed out that the rapid progress of Japan in recent years has been achieved as a direct result of official stimulus, official interference and even of official compulsion. At the same time, however, it is pertinent to remark that those who are called in to help in the regeneration of the province need not be officials. The State need only employ where private enterprise fails to do so. If privately organised bodies of men arise with sufficient foresight to engage skilled workers from other countries to train local labour, then there will be the less occasion for the State to interfere. The important point is that the prosperity of the people must be increased either through Co-operation or the working of private agencies, or, where these fail, through further Government action. In so far as the future of agriculture is concerned, it is doubtful if any private agency, adequate to the task, will come into being. The number of agriculturists is so great and their average income so small, that it is unlikely that sufficient funds would be forthcoming

from voluntary contributors, and it will probably be found necessary to fall back on State expenditure and such measure of control as State expenditure involves.

This discussion of the need of some form of economic pressure as a stimulus to progress cannot be closed without reference to the effect of revenue rates on the standard of agriculture. In former days the State demanded one-third of the gross produce, and sometimes more, and it is obvious that a cultivator striving to secure at least sufficient for a bare subsistence would have to produce more than if the demand were considerably less. Where there is practically no alternative to agriculture, it is possible to make heavy demands on the agriculturists without driving them to abandon their industry. In other chapters, it is pointed out that the decrease in the revenue demand under British administration has facilitated the introduction of the evils of facile credit and consequent debt, and of high land prices and resultant speculation by non-agriculturists; that is to say, the decrease in revenue demand, which was intended to benefit the cultivators, has actually involved them in temptations which they have been unable to resist and in troubles which were new.

Experience shows that the people prosper more under a full but moderate assessment than under a very low one. It does not necessarily follow that a large enhancement of the revenue demand would lead to a marked increase in prosperity, but it does seem to be true that the reduction in the demand has tended to remove a stimulus to improvement. From a sum estimated at one-third of the gross produce, the demand has been decreased to one which is roundabout 5 to 8 per cent. of the gross produce from the land, without taking live-stock of any kind into account. During the slump this proportion rose to 12 per cent. in places. But where the customary rent is a half share of the produce, the land revenue can hardly be said to influence the standard of cultivation. In Japan the land revenue is about 16 per cent. of the gross produce. As has already been pointed out, the cultivator was, in the past, apt to confine his exertions to what was necessary to gain a bare living, and, in so far as this was true of any considerable number, the reduction of the demand must have removed the need for some of the exertion. That this conclusion is not far-fetched, evidence is forthcoming from other countries. When the rapid opening up of the great American prairies to wheat cultivation produced a marked decrease in prices of agricultural produce in Europe, the resulting fall in the farmer's income acted as a great spur to increased efficiency of production; the introduction of scientific agriculture was expedited and better methods and better business organisation were adopted. On the Continent of Europe most of the cultivators were owners of their

fields; in France 77 per cent., in Germany 88 per cent., in Denmark over 80 per cent. are owners and accordingly these had no one but themselves to look to for help against the consequences of low prices. In Ireland, however, the depression was met largely through a decrease in rents and there was little effort at improved methods of production(1). Later, when the land purchase scheme replaced rents by annual instalments of the purchase-money which were frequently less in amount, there was some danger of a drop in productivity which was only averted by the introduction of co-operation and the institution of a Department of Agriculture. Somewhat similarly in England, it is said that the failure to develop new methods has been fostered by the willingness of the landlords to reduce rents instead of insisting on better and more energetic measures being tried. The distress which stimulated continental farmers to revolutionise their methods was met in England by a reduction of rents, amounting to about 30 per cent. of the whole. The landowner's very kindness, his easiness towards unprogressive tenants in difficulties has thus injured, rather than helped, the industry as a whole(2).

In the Punjab, it is difficult to trace the influence of land revenue on production; it is such a small fraction of the total outgoings of a peasant proprietor that its influence can hardly be great. The landlord will grumble at the revenue and describe it as crushing while receiving four or five times as much from his poorer tenant. Some Settlement Officers have claimed that revenue does affect production, but they have not attempted much analysis of the subject.

Rents, however, do clearly affect production but in a round-about way; the keen competition for land, especially near assured markets such as the neighbourhood of big towns, inclines tenants to offer high rents in the hope, and perhaps the assurance, that by toiling at highly intensive cultivation they will be able to pay and still earn a living. Once the rents have been pushed high, the tendency is for the landlord to keep them high by insisting on his tenants maintaining the same high standards of cultivation; in so doing the landlord is rendering great service to agriculture and to the province. But it is important to remember that the improvement in cultivation begins with the tenants and not with the landlord; the ordinary landlord does not decide to raise cash rents steadily so as to enforce a gradually increasing standard of cultivation on his tenants; he is usually a passive recipient of his

(1) *Rural Reconstruction in Ireland*, p. 24.

(2) *State Help for Agriculture*, p. 41.

Outler: *Short History of English Agriculture*, p. 310, Hall: *Agriculture after the War*, p. 64, a Dutch critic of British agriculture, in a letter to *The Times* in January 1922, ascribes its relative backwardness to the low, rents charged by landlords (among other causes).

rent. It is the competition between tenants willing to offer almost any terms in order to secure the chance of a livelihood that is the motive force in stimulating highly intensive culture.

The same feature is found in the colonies, especially in the case of cash leases for a term of years for comparatively large areas. The British Cotton Growing Association have rendered great service to agriculture by showing that high rents can be met from a greatly improved system of cultivation and management, and their example has stimulated others to emulation. If the general standards of cultivation could be raised to those found on the lands under this Association the outlook for the province would be bright indeed, but with everything clear to their eyes neighbouring grantees are apt to believe or persuade themselves to believe that such results can only be obtained by Mr. Roberts and are beyond their reach. There is still a great area of Crown land available for leases, and the State has both a right and a duty to insist that the standard of cultivation should bear some closeness to that which the British Cotton Growing Association has shown to be both practicable and profitable.

That the Punjab soil responds to good cultivation is amply proved; it also responds to organic manures, dung or green manure, but not to artificials; but it does not lend itself readily to the sinking of capital in improvements. There is little use that an enterprising owner can find for his capital beyond the sinking of wells; drainage, levelling, and ridging provide little opportunity, and the lack of any manure which can be bought in quantity with an assurance of a profit from its use is a serious obstacle to development. The scope for private canals is restricted in the plains and nearly exhausted in the hills. In short, the term improvement is almost confined to the sinking of wells, as the history of grants under the Land Improvements Act shows.

The question has repeatedly been raised whether the Punjab system of charging revenue on land irrigated from wells is a deterrent on improvement or not and merits discussion. The late Sir Ganga Ram was a powerful supporter of the theory that any liability to enhancement of revenue, even after 30 or 40 years, was an influencing factor in preventing capitalists from sinking money in land; and in other provinces the Punjab practice is regarded as open to serious objection. The matter is one of considerable importance and may be illustrated by the case of irrigation wells. The present practice is to levy a higher land revenue on land so irrigated than on dry land, on the ground that it yields higher outturns, pays generally a higher rent, and as the State claims a share of the rent it should

pay a higher revenue. The case against this is largely due to a misunderstanding as to the practice in force where a special *chahi* (or well) rate is not levied. It is not a new question. Dewan Sawan Mal had it before him long before the British administration was introduced, and seems to have decided that a lump sum levied on the well itself, without reference to the number of acres irrigated each year, was the most suitable. In his time, the great difficulty was to get the land under cultivation and to keep the cultivators on it, and this was unusually acute in the south-west of the province, so that it may safely be assumed that this form of assessment was not found to deter people from sinking wells. Amongst the earlier revenue officers, Prinsep devoted much consideration to the matter and came to much the same conclusion as Sawan Mal, namely that a light tax levied on the well was readily paid and did not hinder the expansion of well irrigation. The Famine Commission of 1880, however, were in doubt and suggested that the Punjab might adopt the system in Madras and Bombay, where a higher rate is levied on all land capable of being irrigated from sub-soil water, whether actually so irrigated or not. It is a light rate and probably does not yield more than the Punjab rate would on such land as is actually irrigated. Land irrigated from a well is not there liable to any enhancement of revenue on account of the well so long as the well is kept in good repair. This sub-soil water tax has its critics; the official view is that it does not discourage the sinking of wells, but a non-official witness stated that irrigation from wells was in fact declining and that the sub-soil water tax was the cause.

In the Punjab where sub-soil water of sorts is found almost everywhere in the plains, the total sum collected from wells, if spread over the whole area, would be so small as hardly to be noticeable, but there does not appear to be any evidence that such a change would encourage well-sinking.

After the Famine Commission of 1880, came the Land Improvements Bill (enacted in 1883), and the Select Committee on this Bill recommended that wherever improvements were effected through loans granted under the Bill (*i.e.*, Takkavi loans) all profits arising therefrom should be exempted from increase of assessment for all time. This, however, was not agreed to. The Famine Commission of 1901 were definitely against any assessment on wells; "we are convinced," they said, "that nothing short of a permanent exemption will stimulate the owners of land to that full activity which is on every ground so greatly to be desired. We recommend that in all future settlements any increase of assets due to the construction otherwise than at the expense of the State, of wells, tanks, and other artificial means of irrigation should be permanently exempted from assessment

to revenue." At the same time the Commission objected to the Bombay practice of taking heavier revenue from land with sub-soil water. To sum up, the practice of charging a higher revenue on land irrigated from wells has been repeatedly challenged, in 1863, in 1880, in 1883, in 1901 and again in 1929, but in every case the objection has been overruled after careful examination. Revenue officers of long experience in the Punjab have repeatedly stated as their opinion that the assessment does not in fact have any effect in deterring people from sinking wells; no such extra assessment is levied until a sufficiently long period has lapsed to enable the owner to recoup himself twice over from the cost of sinking the well. Wells sunk during the period of a settlement are of course not taxed at all for the remainder of the term, and the exemption is carried on for a further period so that the calculated profits will far exceed the sum invested. In the United Provinces the same opinion holds the field. As a matter of fact the issue rests with the landowners themselves. In Bombay and Madras the Settlement Officer levies a sum on each field separately, and the owners hold each field separately from the State; they have no option as to how the revenue demand shall be distributed amongst themselves as there is no joint responsibility under the *ryotwari* system. In the Punjab, the revenue is assessed not on the fields but on the village as a unit, and its distribution amongst the owners is decided by themselves. It is true that the Settlement Officer in calculating the sum to be levied takes into account the area irrigated by wells and raises his total demand by the sum he thinks is fair on account of well irrigation; but it is the total sum which is imposed on the village and not the details of it. It is left to the owners of the village to arrange for its distribution and collection, and they have the choice of levying a flat-rate (which would be similar to the Bombay system) or of following the Settlement Officer's calculation. So that the well assessment in the Punjab is the selection of the landowners; they are in a position to avoid it by charging the same rent for land irrigated from wells as for dry (*barani*) land; the State by statute is limited to a share of the rents or net assets and if rents on well lands are no higher than on dry lands the State will not be able to levy a higher revenue.

The two systems may be contrasted thus: in Bombay nothing extra is charged on improvements in order to encourage them, but a higher rate is levied on all land to make up for this loss; there is no reason to believe that in fact there is more capital sunk in land improvement in Bombay than in the Punjab. In the latter province, no extra charge is made for thirty years or for a period calculated to recoup the landlord twice the amount he has sunk in the improvement, and the rate on dry lands is kept

low, and it is claimed that there is no deterrent effect on well sinking.

Although the matter is not free from some difficulty, there is no doubt that the landowner is dealt with with much greater consideration than other people. Any manufacturer who increased his income by investing capital in improved machinery would be charged income-tax the very next year on his additional income, although he would be allowed to deduct a sum on account of depreciation. In both cases the real basis of the demand by the State is that funds are required for State activities, and it is sound policy to take from those best able to pay. If once again the Punjab system of well assessment is attacked, the objectors may fittingly be challenged to prove that it restricts investment in improvements.

CHAPTER IX

THE DISTRIBUTION OF THE LAND AMONGST THE PEOPLE

Gross acreage cultivated and culturable area—the land tenure system in the old districts and canal colonies—owners' holdings in the Punjab—holdings in Europe—and Egypt—Punjab Landowners do not farm—owners of cultivators in the Punjab—some Indian figures—example of Japan—lessons from other countries—extensive cultivation on small holdings—wheat—how the small holder may prosper—economic holdings—fragmentation—misuse of the holding—the water limit.

Of the total area of the British Punjab, some 62,000,000 acres in all, about 27 million acres are cultivated every year of which again about 3 million acres are sown twice in twelve months. A vast area of roughly 12 million acres consists of mountain, rocky hills and unculturable land such as river-beds and banks. In the official returns there is a great area described as "culturable but not cultivated." but the 15 million acres included under this description are largely village waste, catchment areas for the ponds, nullahs, and so on. A further large portion consists of the great Sind Sagar desert, and similar jungle tracts which are not likely to come under any irrigation scheme, while other areas are so infertile that they cannot be regarded as available for the extension of cultivation.

In the districts bordering the Jumna there are considerable areas of village forest which may yet come under the plough; in the central districts cultivation seems to have reached the limit of area; elsewhere it would be rash to suggest that crops will not in some future time be found where now is scrub or sand.

The economically important areas are the 27 million acres under cultivation every year and the 3 or 4 million acres which are available for cultivation whenever conditions are sufficiently favourable. The totals are being added to as irrigation is extended.

This land is held under two broadly distinct systems of tenure, one provided for by the Land Revenue Act, and the other by separate deeds of conveyance. In the old settled districts of the North, Centre and East, the soil, but not always the mineral beneath it, is held in full proprietary right, subject to the payment of revenue, by the village community in common. The State is supreme landlord and retains important rights of resumption for

public purposes, or for serious crime or for failure to pay the revenue or for refusal to accept the new demand at settlement, but these are so rarely used that the full rights of the village community are seldom disturbed and the rights of the State are apt to give way to the duties and responsibilities of a great landlord.

The village body of owners contract with the State at every new settlement of the revenue to retain their position and rights on payment of the revenue demanded. The settlement is a bilateral contract, the village owners have the right to appeal against the demand and to reject it and their rights in the land; their hard legal option to accept or abandon the village is in practice considerably modified by the solicitude of the State, as supreme landlord, for the welfare of its people.

There is no record of any modern abandonment, as the State is only too willing to modify the contract whenever it is found to press too severely on the village body; if the settlement proves too favourable to the proprietary body they gain and the State makes no claim; if it proves too heavy a re-settlement may be ordered and the contract modified.

Once the proprietary body has accepted the revenue demand on the village as a whole, they are at liberty to distribute this at their discretion amongst themselves. Usually they agree to distribute the revenue on the same lines as the settlement officer has calculated it, so much for good land, so much for sandy fields, so much for well-irrigated land and so much more for land under the great canals, but this does not relieve them of their joint responsibility for the revenue.

In practice this is collected from the individual owner, but if any one default it is imposed upon the body which has the right to take over the defaulter's land. If any owner abandon his land, it would be taken over by the proprietary body. Both in law and in practice the rights of the village community are carefully preserved; they are the owners of all the village "common" or *shamilat*, with its trees, grass, etc., and they own the site of the village buildings.

The second system of land tenure has grown up without its importance being fully understood. In the great canal colonies, every single grantee or purchaser holds directly and individually under the State, from which he has derived his rights; and each is bound by his separate agreement to pay land revenue. This approaches to the *ryotwari* system of Bombay and Madras, except that the areas here are larger, as in those provinces each separate plot is held in separate agreement direct from the State, and the holder may reject any of his plots if he does not consider it worth the revenue assessed upon it.

Under the old system, all land, to whatever purpose applied and whether cultivated or not, is liable to the payment of land revenue; when the sum to be demanded as revenue has been decided upon by Government it has to be announced for each estate (almost invariably a village) to the owners thereof. The latter possess rights of appeal, and, if they so choose, any number who would be liable to pay more than half the sum demanded may refuse to be liable for it. There is a definite procedure of announcement for each estate, of reconsideration and of acceptance or refusal. It is only when agreement has been arrived at that the assessment is confirmed by government. If any individual at any time refuses to pay his share, the village body have the right to pay it and take over the land.

In the colonies where land is held in proprietary right it is a condition of every conveyance that the person acquiring rights shall pay such land revenue as may be imposed by competent authority, and this agreement is a separate contract with each proprietor. Here the land revenue is demanded not from the village community but from the individual; it is not a lump sum on the village as a whole which the proprietary body has agreed to pay but a rate per acre, and usually per matured acre, on a holding. If the individual proprietor refuses to pay, the State can resume and is under no obligation to offer the holding to other proprietors in the village, who have no residuary right to assume possession on payment of the land revenue. To what extent the colony system will tend to approximate to the older one is matter for conjecture, but as each proprietor possesses his separate deed of conveyance, containing the conditions on which the land was sold, he retains his right to refuse to pay the land revenue on his own holding, subject to his abandonment of the land. Over the greater part of the colonies, the land is held not by proprietors but by tenants of the State who pay no land revenue but only a rent, which is described in their terms of tenure.

It is doubtful if the systems of tenure found in the province impose any obstacle of any kind to the development of agriculture. Their effect on debt is described elsewhere.

So much for the land and the manner in which it is held from the State; it has now to be seen how it parcelled out amongst the people. It will be simplest to begin with areas only and to confine attention to such land only as is cultivated, whether annually or in rotation. Land which is not available for cultivation or which, though available, has not yet been brought under cultivation may be ignored for the present.

Since the first edition of this book was published the writer has conducted a detailed inquiry into the size and distribution of

owners' holdings (1). The main conclusions may here be stated :—

	Percentage of holdings.	Estimated No. of owners.	Estimated No. of acres.	Percentage of total cultivated area.
Under 1 acre ..	17.9	625,400	313,000	1
1—3 acres ..	25.5	908,400	126,800	4.4
3—5 acres ..	14.9	520,000	1,935,000	6.6
5—10 „ ..	18.0	630,600	4,400,000	15.1
10—15 „ ..	8.2	288,300	3,353,000	11.5
15—20 „ ..	4.3	150,100	2,444,000	8.4
20—25 „ ..	2.7	94,000	1,967,000	6.8
25—50 „ ..	4.8	168,700	5,887,000	20.4
Over 50 ..	3.3	120,900	7,452,000	25.7

These conclusions may be broadly stated as follows:—About 17.9 per cent. of the owners of cultivated land in the province possess less than one acre of such land each and the area thus owned is only one per cent. of the whole.

About 40.4 per cent. of owners own from one to less than five acres, the land involved being about 11 per cent. of the whole.

About 26.2 per cent. of the owners possess from five to less than fifteen acres, the land being about 26.6 per cent. of the whole.

About 11.8 per cent. own from fifteen to less than fifty acres, the land being 35.6 per cent. of the whole.

About 3.7 per cent. possess fifty and more acres and own, at a rather rough estimate, 25.7 per cent. of the land. Thus while the great majority of Punjab peasants own very small parcels of land, the greater portion of the cultivated land is held in holdings of over fifteen acres.

These figures call for the most careful consideration and some attempt will now be made to interpret them. In the first place, it should be noted that of the holdings below one acre, the majority belong to non-agriculturists, especially in the sub-montane districts like Kangra and Rawalpindi; a large number of these plots represent gifts to Brahmins made on the death of the late owner, and yet more represent gifts to menials, probably made to retain their services in the village. These petty holdings are not particularly associated with fruit and vegetable cultivation,

(1) *The Size and Distribution of Agricultural Holdings in the Punjab* (Board of Economic Inquiry—Rural Publication, No. 4, 1925).

but are the result of inheritance or of purchases by non-agriculturists or gifts to non-agriculturists. It is probable that most of the owners, when agriculturists, cultivate more land on rent in the same or adjoining villages.

The next important point is that apart from the colonies, the size of the holding closely corresponds to the rainfall. In the early days before artificial means of irrigation were common, rainfall was essential to successful agriculture, and population tended to aggregate in tracts where rainfall was plentiful and to be scattered in areas of scanty rains. The result is the well-known congestion along the sub-montane districts and to the east and the sparsely inhabited state of the south-west.

Apart from the newly colonised tracts, the size of the holdings has nothing whatever to do with any policy of Government. The history of England does not appear to have any parallel here; there does not appear to have been any change in the owners' holdings to suit the more profitable forms of agriculture. So far as can be ascertained, the distribution of the land is the result of natural causes, a people seeking food and dividing the land by sharing amongst the sons.

In order to obtain a better understanding of the position, it may be of benefit to compare the figures with somewhat similar statistics for other countries. The average cultivated area per owner in the Punjab is between seven and eight acres.

In Europe, the averages are: Belgium 5·7 acres; France 15·5 acres; Germany 19·25 acres; England 26·95 acres; Scotland 56·31 acres and Wales 38·05 acres. These figures would be higher, as would also those of the Punjab, if the holdings under one acre were omitted from consideration. In Asia, it is not easy to secure figures for most countries; in Madras, the average *ryotwari patta* comprises 5·3 acres, of which 4·1 acres is dry land and 1·2 acres is well-irrigated. In Japan, the average holding is said to be 2½ acres per family; over 70 per cent. of the total number of families are living on less than two acres of land, while those cultivating (not necessarily owning) more than seven acres do not constitute more than 4 per cent. of the agricultural population(1). The position in Bengal is not easy to ascertain as the great estates are divided up into numerous shares, but it has been stated that 95 per cent. of the landlords receive less than seven rupees a year as rent, which would indicate extensive subdivision. In Egypt, the subdivision of owners holdings has been carried much further than in the Punjab, but the land is all irrigated, it is mostly alluvial and it bears from two to three crops a year.

(1) *Japan From Within*: Ingram Bryan, p. 117.

The figures are interesting and are given for comparison with those of the Punjab :—

Distribution of holdings in Egypt : a feddan is about one acre.

	Feddans.	Percentage.	No. of Owners.	Percentage of total owners.
Up to one feddan ..	533,540	9.5	1,357,573	66.6
From 1 to 5 feddans ..	1,101,930	19.7	526,961	25.8
From 5 to 10 „ ..	560,945	10.0	82,677	4.0
10 to 20 „ ..	530,144	9.5	38,830	1.9
20 to 30 „ ..	288,522	5.1	11,935	.6
30 to 50 „ ..	357,872	6.4	9,338	5.5
50 upwards „ ..	2,224,077	39.8	12,574	.6
Total ..	5,597,033	100	2,039,888	100

In some European countries, petty holdings are frequent; Switzerland, for instance, has few owners of large estates and no large landowners who live on rents; there is practically little tenancy, and the most usual size of a farm is from one half to three hectares (1 hectare=2.47 acres). Denmark is said to have 68,000 farms of less than $1\frac{1}{2}$ acres, but these seem mostly to be of the nature of “allotments” providing part-time occupation for labourers, or for the village artisans; about half the farms are between three and four acres, but if petty holdings are excluded it will be found that the typical farm in Denmark is roundabout 25 to 40 acres. In America, the average farm is about 140 acres, but shows a steady tendency to decline; there are, however, few small holdings. In Canada, the greater proportion of farms are over 100 acres.

From the above it will be seen that from an acreage point of view, the Punjab is far from being singular in having numerous small holdings. It is distinctly better off than most provinces in India, and better than Egypt and Japan. There are numerous openings for farming on lines customary in England and America, but the owners of the larger areas show little if any inclination to farm these themselves. Almost all the big landowners prefer to work through tenants in preference to labourers. The reasons for this are several. Chief among them is the fact that the customary rent is a rack-rent which returns to the owner more than he could obtain after paying wages to hired

labour; another probable reason is that the times during which it is possible to plough with the local implement most of the lands are strictly limited to the few days following rain or artificial irrigation, and that these occasions are themselves comparatively few. The result is that on the comparatively rare occasions when ploughing with the local implement is possible, a large number of men must be engaged on this task who could not be employed at other times on the same estate under the existing system of extensive cultivation. Labour hired for ploughing would have to be released as soon as the occasion permitting ploughing passed away, it therefore could only be casual labour. The tenant usually tries to secure as much land as his cattle can plough, and if at times he has no work to do that is his problem and not that of his landlord. The chief reason, however, is that it is easier to rack-rent a tenant than to exact a fair day's work from a labourer; tenants do not need supervision as labourers do, and with high rents to pay they must cultivate up to a fair standard if they are to obtain sufficient for their families. The absence of large well-managed farms in the Punjab is a serious defect, which is only partly made good by the estates, mostly in the colonies and rare elsewhere, under really skilled control; in the few cases where landlord or grantee devotes himself to securing a high standard of husbandry from his tenants, the results stand out as striking examples of what the province can produce when the Will to Better Farming is present.

The difficulties of getting good work from hired labour are found in England also where the success of the small holders' movement is largely due to the unceasing industry of the family. The fact that a fair living was being obtained in that country from fifteen acres or thereabouts led to the idea that the land should be divided into small holdings of fifty acres or less and that if the owners proved obdurate then public bodies should be given compulsory powers to purchase from them; several Acts have been passed with this object but the number of small holdings does not increase in response to the efforts; some small holders acquire further land on rent and pass out of the class of fifty acres and less, others give up the struggle and leave their land to others. The idea of dividing the land amongst the people is popular with many voters, and political parties are not slow to hunt for support with this as part of their policy, but experience shows that the small-holder, if he is to succeed under English conditions, must work harder, more intelligently and for longer hours than the paid labourer, and must also be able to receive help from his family. Large farmers seem to agree that if their labourers worked as well as the small holders they could pay them in wages a sum

higher than what the small holders earn(1). In England there is considerable difference between the uses to which large and small holders put their land; the latter grow vegetables, fruit, poultry and cultivate intensively, while the large farmer goes in for cereals, sheep, cattle, and so on. In the Punjab there is unfortunately little recognition of the truism that small holders should not grow such crops as wheat which respond little to intensive methods, but should concentrate upon crops in the cultivation of which their ample family labour can find full occupation with valuable results.

In the details of holdings given above, the figures for the Punjab were those of owners, while those for other countries were for holdings, whether owners or tenants: the author has carried out an investigation into cultivators' holdings in the Punjab (2) and the results deserve to be repeated here:—

			Percentage of holdings.	Estimated No. of cultivators.	Percentage of cultivation
One acre or less	..	..	22.5	904,000	1.5
1—5	..	..	33.3	1,332,000	12.1
5—10	..	..	21.2	848,000	20.6
10—15	..	.	10.2	410,000	17.4
15—20	..	..	5.3	212,000	12.3
20—25	..	..	3.1	128,000	9.1
25—50	..	..	4.2	164,000	18.5
Over 50	..	..	1	20,000	7.9

These figures when compared with those for owners bring out several striking and very important facts; there appear to be about 500,000 ownerless cultivators, a real tenant class; the number with one acre or less is disconcertingly great; numerous small owners in the 1 to 5 acre group have managed to get enough land on rent to take them out of this group into one higher up; once the fifteen acre holding is passed the number dwindles sharply. As the size of a holding considered culturable by one yoke of oxen is about 14 acres, it is clear that very many have failed to increase their holdings to this size, so that there is a real demand for land on rent, a fact which accounts for the high rents

(1) Cf. *Encyclopædia Britannica*; also Levy; *Large and Small Holdings*.

(2) *The Size and Distribution of Cultivators' Holdings in the Punjab* (Punjab Board of Economic Inquiry, 1928.)

*The lack of will to secure living
& placid acceptance of an avoidable
low standard of life.*

and the ability of the landlord to exact a fifty per cent. share instead of a reasonable cash rent.

The unpleasant feature of the figures is the refusal of owners with more than fifteen acres to cultivate these themselves, and the absence of anyone farming land on western lines. This refusal to make the effort required to make a good living out of farming even when the opportunity is present illustrates better than any other single fact the lack of the Will to Better Living and the placid acceptance of an avoidably low standard of life. Over one hundred thousand owners in the province have each over fifty acres of cultivated land, and eighty thousand of them will not cultivate them themselves. They present eighty thousand good arguments against making any further large grants in the colonies, and with the coming of provincial autonomy and an enlarged franchise they offer a target for whatever candidates may profess socialistic leanings. From the economic point of view they are largely a dead loss.

The Census Report for 1921 gave the following table, showing the number of acres cultivated per cultivator in India :—

Bombay	..	12.15	Burma	..	5.65
N.-W. F. P.	..	11.22	Madras	..	4.91
Punjab	..	9.18	Bengal	..	3.12
C. P. and Berar	..	8.48	Assam	..	2.96
U. P.	..	2.51			

The figures were probably arrived at by simple division without further detailed inquiry, but though inaccurate they are useful to indicate relative positions of provinces, and the intense pressure on the soil.

That the Punjab holding is not by itself a reason for the prevailing poverty is clear from the example of Denmark where there are 68,000 farms of less than $1\frac{1}{2}$ acres, and 65,000 more between $1\frac{1}{2}$ and 12 acres. The soil, according to Mr. C. F. Stickland C.I.E., late I.C.S., taken as a whole is lighter and poorer than that in the Punjab; the mainland contains large tracts of sand and scrub comparable, in appearance with the Punjab Thal and much less fertile under rain or irrigation. Their cultivation of these small farms is intensive and involves constant labour together with the use of science and capital. The outturn of wheat averages 36 maunds per acre (1).

A different tale comes from Egypt where the holdings are smaller than in the Punjab, but the land is so fertile that three million acres of land irrigated by the Nile canals yield five million acres of crops; the petty holdings bear the best cotton in the world and so provide at least a subsistence for the people, who are much

(1) Studies in European Co-operation, Vol. II.

*The Punjab holding is not by itself
a reason for prevailing poverty.
Egypt - Jordan - Balkan - Denmark - Austria*

poorer than those of this province and much more heavily taxed. In the Punjab there is abundant uncultivated land everywhere except in one or two districts, and the villages are spread out without stint; in Egypt there is a clear cut between the Nile basin which is irrigated and the surrounding country which is desert, there is not sufficient rain to mature a crop without irrigation and so the land within the Nile basin is required for crops with the result that the houses are heaped together into as small a space as they can be crammed so as to leave all the room possible for cultivation. Horses and ponies are rare; cattle are miserable creatures and the donkey provides much of the power which the Punjabi gets from his bullocks.

It would surprise an Egyptian cultivator to be told that in the Punjab there are great tracts of good land left as catchment areas for village ponds or village forests (as in Karnal) and that there are open spaces for cattle to stand on.

Japan affords an interesting example of the state a country can drift into when it ignores modern knowledge, especially modern scientific agriculture and modern methods of organization. The average holding is between $2\frac{1}{2}$ and 3 acres. As a matter of deliberate policy, the country was kept secluded from intercourse with the nations of the West until 1853; and it was not until 1872 that the feudal system of government was replaced by the present Imperial regime. In the last fifty years remarkable changes have been effected, but the people are still miserably poor. Cultivation is still done by human labour with rude implements. Only occasionally is the farmer assisted by a horse or an ox, but seldom by a team of animals. Most of the work of transport is performed by human labour, either carrying packs or hauling primitive carts with heavy loads over bad roads and absurd bridges built like an arch to obviate grading (1).

The tiller of the soil is unable to extract even the most frugal living from his tiny holding in spite of the great labour he expends on intensive cultivation and the free use of night-soil; this fact accounts for the subsidiary occupations, for, without sericulture, the Japanese farmers would hardly be able to maintain themselves. About 15 to 17 per cent. of the total yield goes in taxes, as compared with less than 5 or 8 per cent. in the Punjab. The annual land tax is fixed at 3 per cent. of the total value of the land, and the local tax at 1 per cent. In the Punjab the land revenue is about one-half of 1 per cent. of the land value. Thus the Japanese farmer has practically no oxen to do the heavy work for him, he is heavily taxed, he has a minute holding and his poverty is so great that he is forced to have recourse to some

(1) Cf. Commercial No. 1 of 1920. Report on Japanese Labour.

additional means of livelihood, such as sericulture, manufacturing articles from rice, straw, etc. In everything he is assisted by the labour of his wife and children. The Punjab peasant may well congratulate himself that he is far better off than his fellow in Japan (1).

It should be unnecessary to point out that where holdings are small only the most unremitting industry will serve to provide a livelihood. The system of cultivation must be highly intensive and the income from the land must be eked out by income from some subsidiary occupation. In Japan even these combined are hardly sufficient to ensure a decent living. In Belgium Science and Co-operation have shown the industrious small holder how to employ capital with profit. The result is interesting and should be convincing. It is that, if a large amount of capital is to be employed in scientific agriculture on a small area, human food crops must give way to crops for feeding live stock; vegetable products, such as wheat, must be replaced by animal products. In Japan religious sentiment prohibited the use of animal food (except fish), the few cattle that existed were beasts of burden and milk and butter were little known. The Japanese were thus barred from using the land to the best advantage and have remained poor in consequence. In Belgium only 9 per cent. of the cultivated area is devoted to wheat (2); the land is utilised chiefly for such valuable industrial crops as sugar, beet, tobacco and flax and to raising food for cattle. More manure is used per acre and more cattle are carried per acre than in any other country. The great importance of the human factor in agriculture may be exemplified by comparing what is said above about Belgium and the description of the Russian peasant who, putting nothing into the soil, took out all it could be made to yield; abhorring intensive culture, he thus plundered the land, exhausted its fertility and then clamoured for more. The average amount of land possessed by the peasant ought to have sufficed had it been tilled, as in Prussia or Belgium (3).

The main lessons that the Punjab may derive from Belgium are that the smallness of the holdings is not necessarily a bar to prosperity (4); that enterprise, science, co-operation, capital and

(1) Cf. *Japan Year Book*, *Modern Japan*, *Japan by the Japanese*, etc., Silk reeling and weaving are the most important cottage industries; others are hosiery and match making, buttons, brushes, lacemaking, plaiting of hemp and straw braids, beads and imitation pearls. The wife often has to go out to work, otherwise she remains at home doing cottage work. The children when not at school are similarly employed. Even when playing in the streets they plait straw as they run around. Cf. *Official Report on Japanese Labour*.

(2) Mr. Rowntree (p. 177) gives the following further percentages:—France 21, Germany 5, Great Britain 5, Denmark 1.

(3) E. J. Dillon: *The Eclipse of Russia*, p. 57.

(4) There are over two million holdings of less than 2½ acres in France and nearly as many in Germany.

painstaking labour will yield a decent living from a small area ; but the land must be devoted to those uses which will give the highest returns to human intelligence and skill. In short, if the Punjab peasant is to become really prosperous, he must revolutionize his methods.

As a contrast to Belgium old Serbia may be referred to. Holdings, as has already been stated, are small and manifest a tendency to still further sub-division. But cultivation, as in the Punjab, is still extensive. Education in matters of rural importance is backward, capital is lacking. The people prefer agriculture to industries, villages to towns. Railway communications are sadly undeveloped. The geographical position provides no access to the sea, and so places the country in a state of economic dependence on powerful, and not always friendly, neighbours. Of the total exports 90 per cent. formerly went to Austria either to be consumed there or on their way to more distant markets. The agriculturists retain primitive methods of cultivation ; they use little manure to improve the soil and in consequence obtain but a poor yield ; the use of artificial manure is unknown. Of the total area only 32 per cent. is cultivated. Maize is the most important cereal, and forms the almost exclusive cereal food of the peasants. The wheat that is produced is exported or consumed in the towns. Cattle raising, however, is the most important branch of production ; cattle and products of cattle are the chief exports, pigs being foremost and horned cattle coming next in order. All the agriculturists raise pigs and make much profit therefrom. A further important branch of production is fruit-growing, especially plums, which are dried and exported. Each district is obliged by law to possess a nursery of fruit trees covering at least 12 acres. Old Serbia is a poor and backward country, but its leaders are beginning work on the rural problems before them. It has already realized the truth that the small holder cannot live by food crops alone (1).

The backwardness of some countries is partly due to lack of good markets, they grow cereals because they could not sell garden crops if they produced them. Denmark and Belgium, for instance, are within easy transport distance of London and have largely adjusted their agriculture to supply this immense market. As only ten per cent. of the people in the Punjab live in towns and most of them are poor, the cultivators in this province, except in the immediate vicinity of the large town, grow for their home consumption or for export. Still this does not provide any excuse for persisting in extensive cultivation and in the use of primitive implements. They put hardly any animal manure back on to the

(1) *Servia by the Servians*, Chapters XV, XVI.

land and no artificial manure. They devote a large area (nearly one-third) to wheat and waste more on cattle food. They still in general grow practically no fruit in any quantity and have no export trade worth mentioning in cattle and animal products, except raw hides. Religious sentiment serves to prevent horned cattle being produced with profit. In other countries the most prolific sources of food are potatoes and pigs. The one is not yet a staple article of diet, the other is barred; potatoes will, as stated in a previous chapter, bring much food and considerable wealth to the province when they become an article of general diet. The actual cultivators have no subsidiary occupations, except perhaps hiring their bullock carts for transport. Where handiwork is to be done, special castes or tribes exist to perform it. The efforts to popularize sericulture have met with little success. Bee keeping is rare. The profitable work of rearing geese, turkeys, ducks, pigeon and poultry for sale is almost entirely neglected. The growing of vegetables is looked upon as degrading to a real agriculturist, and *malis* (market gardeners) are actually giving up vegetable growing for wheat in order to raise their social status. The Punjab small holder, in short, is trying to make a living out of his few acres without the aid of animal husbandry or domestic industries, a task which nowhere in the world seems to have been accomplished with any profit. He is able to persist in this hopeless task partly because his wants are small and partly because of the great productive works carried out by Government. Thanks to these, he is better off than the cultivator in Japan and, in proportion to his needs, is probably no worse than the cultivator in Portugal, Spain, Italy, Roumania, Bulgaria, Greece and Serbia. If any considerable improvement is to be effected a very searching enquiry will be necessary to solve the problem as to what crops can be grown in the Punjab with most profit, or rather as to what is the most profitable use to which the land can be put, consistent with the religious sentiments of the people. The qualification is necessary because the production of cattle for milk alone is no more profitable than the keeping of poultry for eggs alone or the production of sheep for wool alone. The great sheep-breeding industry of Australia and New Zealand would not pay those engaged in it unless a market could be found for the meat and the hides. These latter are by-products of the wool producing industry(1).

Of the crops, which such an enquiry would show to be most profitable, it is unlikely that wheat would be one. Wheat is a

(1) That cattle production for milk alone does not pay is conclusively proved by the fact that no Hindu capitalist attempts it. The gradual replacement of the cow by the she-buffalo is probably due to the absence of any restraining religious sentiment as to the disposal of the she-buffalo. A European cow will give more milk than an Indian buffalo.

crop for extensive cultivation where land is abundant and cheap. It requires comparatively little work to get a moderately good yield, but it does not respond so vigorously as other crops to human effort to increase the outturn. It is a poor crop for intensive cultivation. It is a bulky crop to transport five or six thousand miles to market. As agriculture advances, wheat retreats. It continues to a small extent in England as it happens to fit in well with the system of crop rotation and the straw is wanted for bedding; but although the great campaign to increase food production during the war led to a rise in the area sown, this has not been maintained. In the United States the area under wheat has for some years past been declining in favour of other crops and, as has been already shown, it finds little place in the small holdings of Northern Europe. Wherever scientific methods are introduced, wheat loses favour. It declines in area as farms grow smaller, as cultivation becomes more intensive and as more capital is employed (1).

Where, however, there is little capital available and the more intensively cultivated crops are not grown, wheat persists (2); and it may continue to form a popular crop in the Punjab if its outturn can be increased nearer to European standards. One objection raised to putting nearly one-third of the total cultivated area under wheat is that vegetable growth is much more active in the kharif (hot weather) season than in the rabi (cold weather) season; and so a given area under wheat will produce less vegetable growth than the same area under a kharif crop. Also there is more water available in the canals in the hot weather than in the cold (3).

Against all these considerations there must, however, be set others that tell in favour of wheat. It stands transport without much loss or deterioration; it commands a ready market, and, owing to the constant demand, the producer can nearly always rely on getting a full price. It is, of course, an excellent crop for the ignorant agriculturist possessed of neither the capital nor the

(1) In Australia it is said that the least area on which a satisfactory living at wheat growing can be made in Victoria is six hundred acres. This was a dry area.

(2) Cf. Ashly: *Allotments of Small Holdings in Oxfordshire*, p. 64. Wheat remains the most profitable cereal crop for an allotment. For the general argument cf. Carver, *Principles of Rural Economics*, pp. 113, 167; Gillette, *Constructive Rural Sociology*, p. 39 ff.; *Rural Wealth and Welfare*, p. 77; Vogt: *Introduction to Rural Sociology*, p. 70; Rowntree: *Land and Labour: Lessons from Belgium*, pp. 173-7.

(3) This, I understand, is the argument of Mr. W. Roberts, C.I.E., of the British Cotton Growing Association and late Principal, Agricultural College, Lyallpur. It may be noted that if the Punjab agriculturist adopted a four-year rotation as in England the area under wheat would be thereby reduced considerably. In the selection of crops the amount of water available is a determining factor. Sir James Wilson estimated that the average outturn per acre sown was 32 bushels in Great Britain, 22 in Canada, 16 in the United States of America and 13 in the Punjab.

intelligence to produce something more valuable and its value as food is unrivalled.

As an alternative to wheat, cotton has much in its favour. It responds better to intensive cultivation, it seems more capable of improvement under scientific treatment, and it grows well in the hot season. The demand seems to be fairly constant. The pressed fibre comprises high value for small bulk, it is easily handled, is always saleable and stands transport over long distances. It rose to a high place among Punjab crops after the successful introduction by Mr. Milne of American varieties and the great rise in price due to the War. Latterly its position has been threatened by the Bombay mill interests demanding and securing a high protective tariff on cotton goods while purchasing raw cotton from the Sudan and Egypt.

If, however, the province is to see changes that have accompanied the development of small holdings in other countries it is probable that more valuable crops than either cotton or wheat will gain popularity as the practice of intensive cultivation is acquired. Already around the big towns intensive cultivation is freely resorted to, and with an improvement of communications, resulting in cheaper and quicker transport, the further spread of these methods may be anticipated. The chief obstacle to speedy change seems to be the difficulty in obtaining markets to absorb all that could be produced.

Mr. M. L. Darling, C.I.E. told the Royal Commission on Agriculture that any small holder who attempts to depend entirely upon the extensive cultivation of cereals cannot expect anything more than the bare means of subsistence. If he wants something better he must include horticulture and go in for intensive cultivation. Where holdings are small, the cultivator's chief asset is his labour and he has three alternatives; he may cease to grow cereals and turn his holding into a market garden or he may embark on fruit or special crops like tobacco or he may grow leguminous crops and breed and fatten stock. In the Punjab, he stated, conditions are much the same as in Italy and in both countries the cultivation of cereals on primitive lines on innumerable small holdings leads to identical results,—unprogressive farming and a low standard of living. In France, Mr. Darling found the cultivation of cereals combined with stock-breeding, dairying, poultry, fruit and vegetables and perhaps a little tobacco, together with a few sheep and goats (1).

(1) Transport may almost be described as the vital factor in securing markets and problems of transport are much neglected. Mr. and Mrs. Howard have rendered invaluable service in demonstrating how some problems can be solved. Quetta fruit suitably packed can be sold in distant places and Quetta vegetables suitably dried can be sent almost wherever a purchaser is to be found. Science, originality and enterprise can achieve wonders. But there is no very keen competition for town refuse.

by long fallows, absence of manuring, routine methods, lack of intelligence.

inf The present extensive system of cultivation in the Punjab is characterized by absence of manuring, long fallows, routine methods, lack of intelligence and originality, and limiting of sowing to seasonal crops. It is the system which attracts those who possess no security of tenure: it, in practice, involves great waste of both land and labour. The change to intensive cultivation may be brought about by making a fuller use of the existing plentiful labour, by investing more capital in manure, improvements, implements, etc., and by using more scientific methods of cultivation. The Punjabi to succeed, must do what the Frenchman does: work hard; live hard; save hard. There is no other way to success for the small holder.

It is claimed by American writers that extensive cultivation on a large area gives a higher return per farmer or per person employed than intensive cultivation on a small area, and this seems to be true. In comparing systems of agriculture it is important to distinguish between production per acre and production per man; for instance, the production of food per acre is much greater in Germany than in England, but the production per man is fully 20 per cent. higher in England than in Germany. The reason is that, while in England less than 16 per cent. of the land(1) consists of holdings under 50 acres, in Germany nearly half the land is so held. In the Punjab the area available per man is not large and no one advocates, what actually here exists, the cultivation of a small holding by extensive methods. With small holdings the production per man must be small. The capacity of the average human being to earn an income from production is very limited. Labour alone produces very little wealth per unit employed. The Punjab peasant must learn to use more than his labour. He must use every particle of intelligence he has or that can be instilled into him and he must learn to employ more capital(2). From the point of view of the province, as a whole, there can be no question that the change to intensive methods is highly desirable. As land is the chief source of present and future wealth, the more wealth it can be made to produce the better for the general prosperity. The rural areas

(1) But this 16 per cent. of the land comprises 66½ per cent. of the farms.

(2) For the general discussion of extensive versus intensive methods see Seligman, pp. 45, 315, 341; Gide, pp. 177-179; Carver, pp. 166-169, 239-247. Carver (p. 156) says: It is sometimes assumed that a large product per acre is a desirable thing in itself. Such is not the case; what is really to be desired is a large product per man. It is only where the product per man is large that there is a high standard of living and a high standard of well-being for the average man. Where the land is abundant a large product per man is most easily secured by extensive farming. A large product per acre is desirable as a means of getting a large product per man and is not desirable in any other sense whatsoever. A large product per acre with a very small product per man is always accompanied by squalor and misery and we find this to be the actual situation in those countries which can point to the largest produce per acre.

under present standards of cultivation are suffering from a glut of labour; the average cultivator has too much spare time, too much leisure and in consequence earns too small an income. Yet every one of them will admit that he could increase his income by putting his spare labour and his spare time on to his land. It is not the case that a large number of people are out of work all the time, but there is a very large number out of work a considerable number of hours in the year. If from the cultivator's income there were deducted the interest on the sale-price of his land and the wages of his labour there would in the great majority of cases be no profits left(1). And yet it is said that there are few better paying industries than farming. The apparent paradox is due to the fact that, under a hereditary system of land tenure, a large number of people remain cultivating ancestral lands who would never earn a living by the same exertion at any other occupation. Were Punjab agriculture organized on a sound economic basis and the land put to the most profitable use, were the labour available steadily and regularly employed throughout the year, and were present waste eliminated, the cultivators would soon begin to show a profit on their intelligence and enterprise. In Punjab factories the employees work 50 hours a week; the same time and labour devoted to the ordinary holding would soon effect a revolution.

It may be argued that as the holdings are not economic holdings the agriculturists can never be prosperous. An economic holding, says Mr. Keatinge (2), is a holding which allows a man a chance of producing sufficient to support himself and his family in reasonable comfort after paying his necessary expenses. But it is of course impossible to fix accurately the size of such a holding for it is impossible to fix accurately what should be regarded as a reasonable standard of comfort. Situation with regard to markets, fertility and the uses to which the cultivator can put it are determining factors. It may be true that a very large number of holdings in the Punjab are uneconomic now when extensively cultivated that would come well within the economic margin if the system of cultivation were changed, communications with markets improved, and expenses decreased and income increased by means of co-operation. It is not area but net product that determines what is an economic holding. As Mr. Strickland has put it clearly: $2\frac{1}{2}$ acres of good land is economic and 25 acres of

(1) Carver: *Principles of Rural Economics*, p. 315, says: The profits of farming are what is left of the farmer's annual income after allowing himself wages for his own labour, rent for his own land and interest for his own capital. It is doubtful whether half the farmers of this or any other country make any profits at all, while it is certain the poorest of them do not.

Orwin: *Place of Agriculture in Industry*.

(2) *Rural Economy in Bombay-Deccan*, p. 52.

bad land is not. It would seem that the economic holding is a myth, a will-of-the-wisp (1).

A certain area may constitute an economic holding, if situated close to a large market and intensively cultivated with the help of much manure, which would prove well below the economic limit if situated, say, in the Salt Range or the middle of the Sind Sagar Doab. Proximity to market may be as important as fertility and even more important if facilities for transport are not susceptible of improvement. Fertility is nowadays largely a matter of intelligence, industry and the correct application of capital. Similarly a given area may provide a decent living if irrigated from a well under the cultivator's control, while it might prove inadequate if irrigated from a canal working on a rotation. For it is not only the amount of water available, but also its availability at the time best suited to the requirements of the particular plant that determines the use to which the land can most profitably be put.

Again, a holding of five acres in a compact block, irrigated from a well, in a district like Jullundur, may be ample for the support of a cultivator of skill and enterprise, but may be completely uneconomic if scattered in ten or twelve different places, irrigated from several wells in each of which the cultivator owns only a fractional share or right. In most districts of the province, and more especially in the central districts, holdings have been fragmented into numerous fields, not contiguous, but scattered throughout the village area. Numerous instances could be given of villages consisting of a thousand or more fields of which the average area does not exceed one quarter of an acre (2 kanals); in several villages the average area of the fields is not more than one-eighth of an acre (1 kanal). Of these fields some are too small to be cultivated, others are so narrow that it is not easy to plough crossways. In such tracts it is clear that many holdings, at present uneconomic, would have their value greatly enhanced by such a regrouping of the fields as would allot to each owner a solid block of land; the work is not free from difficulties, but a scheme devised by the author has been pressed forward with great success through the agency of special Co-operative Consolidation of Holdings Societies. From what has been written above it will be realized that the term "uneconomic holding" refers to more than the mere area cultivated by each occupier, and that pressure on the soil can be relieved by other measures than migration. In this province, outside the colonies, the holding is the result of historical causes, and the discussion is only valuable when considering the large area under tenants

(1) *Studies in European Co-operation*, p. 174.

and the readiness of owners of more than 14 acres to let part out on rent.

Under most systems of cultivation known to European farmers an area of about 25 acres is necessary to provide for a family. A market gardener can thrive on much less; in Germany it is accepted that from 5 to 50 acres is sufficient to occupy and maintain a family; in England the Agricultural Tribunal of Investigation favoured raising the legal limit of small holdings from 50 to 70 or 80 acres. Much, of course, depends on the standard of living and of work aimed at. As Mr. Orw in has pointed out, the earnings of small holders may be less than those of paid labourers in spite of their longer hours and where high wages are obtainable in industry the small holder is tempted to change his occupation. The majority of the farmers in Great Britain are small holders (*i.e.*, they have less than 50 acres) and nearly all are tenants. The evidence given before the Royal Commission on Agriculture in 1919 was to the effect that the small holders' life is rather a dog's life, they are always at work and never done. They work hard for long hours assisted, when that is possible, by their families—wives, sons and daughters. For many years in Wales the farmers earned less money than their paid labourers, if reasonable interest on their capital be deducted. No class of man on the land has to work harder; with a farm not exceeding 50 acres, it is usual for the farmer to work it himself together with his sons and pay no wages to any outside labour; if he has no sons he may employ a man wholly or for part of the time. The only man who improves his position is the man who has worked hard and for long hours and applied himself to his industry in every possible way, and saved every penny that could be saved. The paid labourer has preferred his own position to that of his employer and has refused to change it for that of a small holder when land was offered to him.

From the above it will be seen that little is to be gained from a discussion as to whether holdings in the Punjab are economic holdings or not. This term has to be used in relation to the standards of cultivation, industry, frugality, etc., prevailing in the locality. In this province it is noteworthy that anyone owning 50 acres or more is apt to regard himself as a big landlord, to give up cultivating with his own hands and to rent his land and live on the proceeds; whereas if only he could be induced to aim at a better standard of living by cultivating it all with his family he would set an example of incalculable value.

In a discussion of the position of small holders in different countries it is necessary to point out that there is not in the Punjab anything approaching to the rich pastures of England. Writers sometimes deplore the decrease in the area of pasture

land in the province, and ascribe to this cause the decline in the number of cows and the high price of milk and *ghi*. The fact is that what is called pasture land or grazing ground here results from the neglect of agriculture, while the rich pastures of England are the result of the expenditure of more capital, labour and skill than is devoted to land under the plough. Neglect of a natural resource is not the way to acquire wealth, and there can be no shadow of doubt that 100 acres under irrigated crop produce more food for both man and beast than did the same area lying waste before the canal came(1). The effect of extensions of cultivation is to produce more fodder than before, but this fodder is required for the bullocks needed to cultivate the land, whereas in the old pastoral days the herdsman had little use for bullocks and turned his available fodder into milk or *ghi*. Much confusion would be avoided if the term "pasture" were omitted from all discussion of Punjab rural questions; the word "chiragah" applied to the village common is equally misleading as every village cow or bullock would agree. England has pasture owing to the frequency of her rainfall and her damp climate and her farmers have had the business sense to put these to the best economic use. The Punjab will never have pasture in the English sense and the word is a mistranslation for waste.

From the above discussion it would appear that what is wrong in this province is that the system of cultivation is not the one best adapted to the local conditions. The Punjab cultivator must not be confused with the farmer of England, America or even Denmark. He is hardly a farmer at all in the usual significance of that word. He is a small holder, a very considerable number are mere allotment holders; yet nearly all follow methods of cultivation that could only pay with a holding of several hundred acres. His position is not worse, it is in many ways better, than those of the cultivators in Southern Europe; it need not remain unsatisfactory; but it will so remain unless he wakes up to a realization of what is essential to his prosperity. He is at present attempting the impossible task of making a living out of a small holding or an allotment by methods which would require from one to two hundred acres to provide him with a decent income. He ignores all the elements of success. Stock-keeping is almost unknown. At the most a few cattle or goats constitute his live belongings. Animal husbandry is restricted by religious sentiment, by ignorance and by prejudice; and

(1) Even of England Sir A. D. Hall says that a given area of land will produce when under the plough, in addition to its usual yield of wheat and barley, just as much cattle food as the same area of land under grass; Agriculture after the War, p. 24, also p. 32:—We may conclude that the crops from land under the plough, when used for feeding cattle, will produce of either meat or milk more than twice as much as the same land will yield when under grass.

without animal husbandry only intensive cultivation can make a small holding pay. As it is not practicable to increase the size of holdings except to a very small extent, there must be a change in the use to which the land is put. The great Punjab problem is: What is the best and most profitable method of utilizing a holding of from five to fifteen acres? The cultivation of wheat is most certainly not that method, although it will probably always pay to have a proportion of the land under this crop. The Board of Agriculture in England announced that information, made available by research and experiment, was sufficient to show that the number of cows which could be maintained on the produce of a given area of land is from two to three times greater when that land is under the plough than when it is under grass and that it is possible for a small holding of from 17 to 25 acres to be made an economic undertaking. To show that dairy farming on purely arable land was sound from the commercial point of view, the Development Commission agreed to advance £40,000 for ten demonstrations(1).

The Punjab problem is not insoluble. Mr. Stewart, the present Director of Agriculture, has shown that a system of rotation far more intensive than is customary can be practised with profit without loss of fertility; and with highly skilled research workers and generous financial provision there should be little difficulty in determining on a variety of such rotations suitable to the different conditions within the province. The experience gained elsewhere, though valuable as indicating what should be done towards the solving of the problem, will not go far towards the actual solution. For in this province the dominating factor seems to be water. Highly intensive cultivation over a large area is hardly possible with the amount of moisture available. It is not merely the quantity of rainfall or of canal water but of the time when it is available. For instance, it is shown elsewhere in this book that owing to the late rise in the rivers feeding the eastern canals, American cotton is not sown in any quantity and that this is found in areas brought under the influence of melting snow; a further example is the difficulty arising from the fact that water is wanted for ripening one crop at the same time that it is in demand for sowing another. In the canal colonies, this difficulty of time could be surmounted by the use of wells to supplement the canal, but the charges for canal water are so low compared with the cost of well water that the colonist refuses to use the wells which exist. Fruit-growing is not likely to be successful without the command of water which wells give and the list of examples could be extended.

(1) Report of the Development Commissioners, 1919.

Unfortunately although both the quantity and time of supply of water are factors limiting intensive cultivation, the latter is too often lacking when ample water is at command as in many parts of the hills and submontane region. There is something else limiting intensive cultivation, ignorance of how to put the land to the most productive or the most profitable use, and the readiness to accept a lower standard of work and of living when a higher standard is within reach. This attitude is dealt with elsewhere but its importance must be borne in mind when discussing the relation between the smallness of Punjab holdings and the poverty of the people. The Punjab need not be poor. It will begin to grow richer when the more enterprising and enlightened amongst its people devote their minds and their energies to the responsibilities of leadership in rural welfare. The magnitude of the task clearly stifles initiative but initiative there must be. Up and down the province are men showing the way and making money while their neighbours barely feed their families. The last fifteen years have brought forward a considerable number of men who have devoted their intelligence and their enterprise to their land with striking success; technical knowledge is improving, the organisation of cultivators into co-operative societies is increasing and the outlook of a large number is now definitely in favour of making a sustained effort to create economic improvement.

English landowning farmers
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CHAPTER X

TENANCY IN THE PUNJAB

Some views on tenancy—and proprietorship—in Europe—and the Punjab—and specially the colonies—the need for security—for improvements—or compensation therefor—share-tenancy as an obstacle to improvement—increase of tenancy in the Punjab—cash versus share rents (batai)—effects of tenancy—on cultivation—where the cultivator is both owner and tenant—on perennials and cropping—on improvements—on cattle—on housing—on education—on credit—and on mutual co-operation.

One of the most difficult problems to deal with in the Punjab, and indeed elsewhere, is to discover that ideal system of land tenure which will encourage the greatest production of wealth from the soil and the greatest welfare for all who work on it. The merits of landlordism, peasant proprietorship and short and long term tenancies have been discussed at length by theorists, and latterly there has risen a school of thought which would advocate what is called "nationalisation" of the land, which seems to mean placing the whole cultivated area in the hands of tenants under the State, much as is the allotted land in the Punjab colonies. Unfortunately most of the discussion has lacked the advantage of an analytic examination of actual experience, and there is too great a tendency to try to argue from first principles without attention to the character of the people concerned. An English landlord is his tenants' best friend and spends fully one-third of his rental back upon the land and its needs; most Punjab landlords levy double the rent an English landlord would do and spend practically nothing back on the land; indeed, if consideration be paid to all that an English landlord provides in the way of buildings and equipment, then his rent is but a fraction of that found general in India. The Scotch claim that their (assumed) pre-eminence in agriculture is due to their custom of long leases, but in most Punjab villages the tenant-at-will on a yearly term stays as long as if not longer on the land than the Scotch farmer, and there does not appear to be good reason to believe that on the average an English tenant remains on the same farm for a shorter period than a Scotch one. The well-known writer, Arthur Young, is responsible for the famous phrase: "the magic of property turns sand into gold", which is as far from the truth as such statements usually are. Crown tenants in the Punjab Colonies cannot be induced to acquire proprietary rights when they already enjoy hereditary rights of occupancy.

A careful scrutiny of the evidence available seems to point to the basic truth that a cultivator, if he is to make the best of his land must have complete confidence that he will be allowed to reap all that he has sown and to enjoy the fruits of all his labours. For that he requires either some permanency of occupation or a clear right to compensation for disturbance, beyond all possibility of dispute.

There are two points which require to be considered, the tendency of some tenants to exploit their land to the utmost and then to move on to other land, and the tendency of some landlords to eject tenants in order to gain unfair advantage of the capital and labour they have devoted to their holding. In the United States it is the first type which has met with condemnation, for there a tenant on the average stays but four years on one farm or holding; there tenancy, it is said, is a constantly increasing menace to a permanent, prosperous and safe agriculture and a contented country-life. It has resulted in the loss of the priceless fertility of the soil, the creation of an unsettled farm population, illiteracy, an inefficient country school system, a drift from farm to city and unprofitable methods of agriculture(1).

Arthur Young, the English traveller, as has been stated was strongly against tenancy: "Give a man the secure possession of a bleak rock and he will turn it into a garden; give him a nine years' lease of a garden and he will convert it into a desert"; the people of Denmark seem to have held a similar opinion: "farm tenancy was seen to be bad. It was bad for the tenant and bad for the country. It led to indifferent cultivation. It pauperised the tenant and left him in ignorance. So the farmers set to work to get rid of landlordism. They found that the tenant could not escape unaided, for the landlords wanted to keep him as a tenant"(2). Prof. Macgregor writes: "Denmark has solved the problem of keeping on the land a large number of contented and prosperous small-holders who are prepared to work harder and for longer hours than is now customary with English farm labourers...But...as far as yield of crops corrected for the proportionate area is concerned, an acre of plough land in Denmark gives no more than an acre of plough land in England(3). That the character of the farmer may be as important a factor as the tenure on which he holds his land seems to be illustrated from Ireland: "The last two generations of Irishmen have accepted without question the doctrine that the cure for the evils of landlordism is to make every man his

(1) Conference of the Agricultural Commission of the American Bankers' Association.

(2) Howe: *Denmark*.

(3) Report of the Agricultural Tribunal of Investigation.

own landlord; and in spite of the obvious fact that the cure has been tried on a large scale and has failed to give satisfactory results, the idea has become so deep-rooted that individual land-ownership is demanded almost instinctively by the tenant of a labourer's plot no less than by the farmer of 30 or 300 acres. The unpurchased tenant wants to be able to buy his holding, the purchased tenant wants to add to his holding, the labourer wants to increase his cottage plot and to become the owner of it(1).

To those ill-acquainted with Irish conditions it may be explained that largely as a result of severe scarcity, even amounting to famine, the old landlord class had to sell to others, mostly Dublin capitalists; against these there was waged a brutal agitation accompanied with every device which perverted ingenuity could think of (since then introduced into India by Congress). The unrest made landlords willing to sell what their tenants were anxious to buy, but the two could not agree upon the price; it was to get over this difficulty of one price offered and another demanded that the various Land Acts were passed, and England raised a large sum on loan and further undertook to pay a fair difference between what the landlord wanted and what the tenant wished to pay. Under these Acts the tenant class became proprietors of their land subject to payment of annual sums to meet instalments of principal and interest. For a time this brought peace, but only for a time; observers say that the new owners work less hard now that they have no rent to pay, the new Irish government has repudiated their liability to pay to English bondholders the monies received as instalments of principal and interest, the farmers refuse to pay these sums to government and the general distress is as bad if not worse than under the former landlords—with this difference, that whereas before there were landlords who could and did share the misfortunes of the tenants, there is now a government so bemused with sentimental dreams that it can spare little thought for the plight of the farmers. Ireland offers a conspicuous example of the truism that ownership alone will not bring prosperity.

Of Europe generally the Agricultural Tribunal of Investigation gave a comprehensive summary which deserves to be quoted here: "Continental experience shows considerable variety as regards systems of tenure. But if one takes a general view of the whole of the country from the Loire to the Vistula, there can be no doubt that peasant proprietorship very greatly predominates. The only remarkable exceptions are Belgium where not much more than a quarter of the occupiers own their land, Holland where the proportion is about one half, and the German provinces

(1) *Irish Economist.*

East of the Elbe, where practically all the land is owned by the occupiers but half of it by large proprietors. So long as there is effective security against unreasonable disturbance, and compensation for loss due to disturbance, much of the benefit accruing from ownership would seem to be secured.

"But the sentiment in favour of ownership is strong, especially in Denmark, and it is significant that many competent observers in Denmark regard the system of ownership as the most influential of the causes of Danish prosperity. Ownership gives a feeling of security and a sense of attachment to and interest in the land which nothing else calls out so strongly; it is also the most satisfactory basis for the co-operative or State provision of credit. On the other hand ownership of land by the occupier ties up capital which might otherwise be used in the equipment and the working of the farm." The importance of the last comment is illustrated from the history of English agriculture; there were a large number of what the Punjab call self-cultivating proprietors, known as yeomen, the pride of the land. They were naturally exposed to the risks of both season and prices, and, between 1760 and 1815, many sold their land in order to take larger farms on rent, using the sale price to finance their larger ventures; as the price of wheat rose, many made such profits that some were able to buy back the lands they had sold, others to buy the large farms they had rented. It was perhaps to something like this that Arthur Young referred when he wrote that to prefer to cultivate a small holding as proprietor rather than a large farm as tenant was to engage in very unprofitable business(1).

In the Punjab the sentiment in favour of ownership is very strong; those who are not members of agricultural tribes complain that they have little opportunity for purchasing land, but there is no obstacle to their taking land on leases for five years to any extent they wish. The writer knows of no such tendency and understands that these people are not taking advantage of five-year leases to any appreciable extent. On the other hand there is the striking fact, mentioned before, that in the colonies occupancy tenants have as a class refused to buy proprietary rights even at concession rates: so that what the agricultural classes desire is permanency and security rather than the additional rights of proprietorship, while the non-agricultural classes seek rather an investment for capital.

The economic importance of this sense of security arises from the encouragement of every kind of improvement which promises a fair return, from the clearing of weeds and manuring to the

(1) Cf. Levy: *Large and Small Holdings*.

*clearing of weeds, manuring,
sinking of wells, embankments.
Banks Improvement. — Drainage*

sinking of wells and making embankments. In the Punjab a tenant-at-will is not entitled to compensation for any such improvement unless he has the written consent of his landlords; on the other hand Punjab landlords, with a few distinguished exceptions, do not spend much money on improving the land under tenants, private canals being perhaps the most conspicuous exception. The law in England used to be similar; every improvement by a tenant, from manuring and tillage to a farm building passed to the landlord on the termination of the tenancy; the same was the case in Scotland. But there were local customs whereby the outgoing tenant would receive from the incoming one compensation for standing crops, land ploughed for a crop, or manured, etc. So long as agriculture was the humdrum affair it remained for centuries, little injustice resulted, but with the advent of scientific methods, and specialisation involving the sinking of capital in the soil, the customs whereby the outgoing tenant received compensation became more general and received recognition by the Courts and were later embodied in various Agricultural Holdings Acts from 1875 onwards. These latter divided improvements into three classes, the more permanent improvements, such as buildings or orchards, required the prior consent of the landlord as obviously the cost might be more than he dared to risk. A second class of intermediate improvements such as drainage, liming the land and so on counted for compensation if the tenant had merely given notice to his landlord of his intention to perform them.

The third class of improvements which entitled the tenant to compensation without any notice to the landlord were such as were within the ordinary operations of agriculture as practised locally. A Punjab example would be the preparation with manuring of land for sugarcane. In recent years the trend of legislation in England has all been in favour of the tenant, until now it is practically impossible for a landlord to turn a tenant out of his holding for any reason except bad farming, without giving him the right to compensation for the cost of disturbance, amounting in any case to one year's rent and not more than two(1). It would seem that the English tenant farmer is in a fairly safe position in regard to any improvements he may consider it worth his while to make, and it might be idle to inquire whether in that country the tenant or the cultivating owner got the better outturns or attained the higher standard of cultivation. But such an inquiry has led to interesting results elsewhere. In the United States, it is stated that crop yields are somewhat greater on farms cultivated by their owners than on tenants' holdings. In that country share (*batai*) tenants outnumber

(1) Cf. C. S. Orwin : Memorandum in the Final Report of the Agricultural Tribunal of Investigation.

cash tenants in 40 out of 48 states, and the share system (*batai*) is generally acknowledged to be a serious obstacle to good farming and especially to any improvements. If the landlord is to receive a fixed share of the produce, even though a large part be due to improvements made by the tenant, then the latter will not improve until he is assured that his share will cover the capital and recurring cost of the improvement.

The system of share tenancy (*batai*) is definitely an obstacle to improvements of the land. The *metayar* system on the continent of Europe is somewhat similar except that there the landlord provides most of the capital outgoings such as buildings, seed, manure, etc., the tenant providing little more than his labour and skill. But when the tenant has to give to his landlord a share in whatever accrues from any extra hour he devotes to his fields, he will not put in more hours of labour than will leave him a fair return, and these are obviously fewer than in the case where he gets the whole return from any extra labour he exerts as in a cash tenancy. The *metayar* system has its uses and so has the *batai* (share); both are defended on the ground that landlord and tenant are mutually interested in the success of farming operations and that this common benefit makes for greater returns. But in India the evidence seems to be sufficiently definite that the share system makes for bad agriculture. In Bihar and Orissa, it was stated before the Royal Commission on Agriculture that when the landlord is receiving what he considers a fair rent, he ceases to be interested in any prospect of the enhancement of his share of produce which might result from improvements. The system leads to stagnation: "A landlord surfeited and not caring to improve and a tenant so heavily taxed on any improvements he may attempt that he makes none. In that province although either landlord or tenant may apply to the Courts for commutation of share rent into cash, it is only the tenant who applies." As one witness stated "the share system deprives the tenant of any incentive to improve and develop his lands on share rents. It is a fact that he devotes his best efforts to his cash-paying lands—if he has any—and is apt to neglect his lands on share rents." The Director of Land Records of that province stated that in some districts ten per cent. of the land on share rents is left uncultivated and that the outturn on such lands is at least ten per cent. less than that of land on cash rents owing to indifferent husbandry. It is interesting to remember that so far back as 1880 the Famine Commission of that year reported of India generally that "*batai* (share) rents are so heavy that inferior lands cannot be cultivated."

The great importance of the foregoing discussion will be appreciated by all who realise that the last eighty years have

seen two great changes in the Punjab—a marked increase in both proportion and acreage of land under tenants and the almost complete substitution of the old cash-rents for the share (*batai*) system. Over half the cultivated land in the province is now held by tenants. The Punjab is not alone in this change. In Japan, tenancy is increasing and there it is said that tenancy always deprives a Japanese farmer of independence and initiative. Even in a *ryotwari* province like Bombay, nearly half the cultivated land is leased out to tenants for cultivation, and this is increasing. There, the Settlement Commissioner told the Royal Commission that this was due to high rentals, but the writer's investigation suggested that it was largely due to the acquisition of great areas by money-lenders (in some cases amounting to half the total) and further to the causes present in the Punjab: large holdings of some and too small holdings of others; the large landowner lets practically all his area on rent, while the petty owner tries his best to add to his holding by taking land on rent.

It is difficult to give reliable figures because the revenue records deal with holdings and not with persons; similarly the Census figures are of little use as they attempt to divide the population into rent-payers, cultivating proprietors, etc., whereas no such close division exists.

A much more reliable guide, and a more important one is the area under tenancy; taking for the moment the case of land under tenants-at-will only then in thousands of acres:

1892-3	there were	9,026	acres out of	22,500	or	40	per cent.
1902-3	„	14,133	„ „	25,780	„	43	„ „
1916-7	„	12,450	„ „	28,034	„	44	„ „
1921-2	„	13,245	„ „	29,370	„	45	„ „
1931-2	„	14,399	„ „	29,913	„	48	„ „

In 1918-19 the total area cultivated by tenants of all kinds was 14,832,884 acres out of 29,140,212 cultivated, or 51 per cent.; the Land Administration Report for 1927 gives the figures: occupancy tenancies 2,408,000 or 8.2 per cent.; others 13,245,000 or 45 per cent.; total acreage under tenants 15,653,000 out of 29,370,000 cultivated; in 1932 the acreage was as follows: occupancy tenancies, 2,234,000 or 13 per cent; others 14,861,000 or 87 per cent; total acreage 17,095,000 out of 29,913,000 cultivated.

Before the British assumed the administration of the province, it is doubtful if conditions were suitable for tenancy on the modern large scale. The Sikh revenue demand was high, although it was not always collected; there were petty chieftains, military

officers with the right to collect dues from the land and large jagirdars between the cultivator and the State and there was hardly room for landlord and tenant on poor lands, except where the persons just mentioned assumed the rights of landlords. With the restoration of order, the demand of the Sikhs was summarily settled in cash instead of kind, with the result in many places it was too high and was later lowered. The demand for revenue in cash was a more serious matter than appeared at the time, and it is possible that rents were entered in the early records as cash rents whether in fact they were paid in cash or kind. Whatever the reason the early records indicate a large preponderance of cash rents, and if these be correct there has been a marked change from cash to kind or share (*batai*) rents. Various Settlement Reports mention the change, thus Lahore: The popularity of kind rents has considerably increased since last Settlement; Gujrat: The area under cash rent is now almost negligible; Amritsar: The tendency of late years has been for the landlord to insist on receiving a share of the produce on the better irrigated lands; as a rule he will accept a cash rent only on unirrigated fields where the crops are always uncertain; Gurdaspur: The landlords' tendency is decidedly towards a rent in the form of a share of the produce; Rohtak: There has been a great development of rent since last Settlement, when Mr. Fanshaw showed the whole area under rent held by non-occupancy tenants as only 123,775 acres including the area held at revenue rates. Now the area, excluding land held at revenue rates, is 259,194 acres. Kind rents are taken on 77,303 acres against 3,936 at last Settlement, and cash rents on 181,891 acres. Kind rents are relatively commonest on irrigated lands, which means that the landlords on the whole command the situation; they take kind rents when the returns of agriculture are secure, but stand out for cash in the precarious *barani* (rainland) tracts.

Other extracts could be given but it should be sufficiently clear that not only has there been a great increase in tenancy, but that there has also been a great change in rents from cash to kind, and that this change has been largely due to the fact that with the spread of irrigation the certainty of a small cash rent has been overshadowed by the practical certainty of a much larger share rent from land protected by canals. Theoretically this change from cash to kind is bad for agriculture. In defence of the share or *batai* rent it is argued that it secures an automatic adjustment of rent to prices, and thereby conduces to good relations between landlord and tenant; that it adjusts rents to seasonal conditions and that it develops mutual interest between landlord and tenant in good cultivation. But these advantages are purchased at too high a price. In the Punjab the larger

*increase in tenancy accompanied by
Batai system in Irrigated lands*

landlord is a rent-receiver pure and simple and spends little if anything back on the land, so that his right to an automatic increase of rent on account of good seasons, higher prices or better cultivation is not clear. The share system is a heavy tax on enterprise and good cultivation by the tenant, and deprives the latter of a large part of his incentive to greater effort. The cash tenant is a more free man, he can reap the reward of intensive cultivation; it is true that he takes a greater risk and a greater responsibility as his rent is due irrespective of the state of the crop, but he has the greater prize within his grasp.

One of the critical problems under investigation in the Punjab is whether it will pay the cultivator to use artificial manures; in other countries, such as England, the use of these is now general, but it is not yet clear that their general use in this province will prove profitable. Of one thing, however, it is possible to speak with certainty and that is that the use of artificials will be definitely obstructed by the prevalence of share rents; where a cash rent is paid the tenant will reap the whole advantage from applying artificials to his cotton or sugarcane; where he pays in kind he will get less than half. The share system will prove an important obstacle in the way of agricultural progress.

That many tenants prefer share to cash rents is no answer to the above; it may mean that they feel bound by custom or that they have no interest in agricultural progress but are content to follow the old methods.

There seems to be no doubt that kind rents are almost always higher than cash rents; as cash rents are taken on poor land and share rents from the better irrigated land, this would be a natural result; but there is more than that, the commuted value of a share rent is far higher than any cash rent that would be demanded. In England, speaking roughly, the rents (cash) represent about 20 per cent of the gross produce in cases where such produce can be valued; in the Punjab kind rents tend to be about 45 per cent. of the gross produce. The latter is a rack rent as on the whole the demand for land from tenants is greater than the demand by landlords for tenants; where this is not the case, where tenants are scarce as in the west, they are able to extract much better conditions. In Jhelum, for instance, it has been noticed that in some cases tenants can only be secured by the grant of occupancy rights (1), and landlords of western districts complain that they cannot get tenants on the usual halfshare basis. The writer has not heard any complaint in recent times that tenants cannot be found for a fair rent, but in the great almost desert tracts of the Sind Sagar Doab it was customary for the ala-maliks to offer occupancy rights to anyone who would come and break up waste land.

(1) Land Administration Report for 1925.

When the cultivator has to give up his return to each dose of capital & labour he applies to the land it will be not in his interest to apply. — 200

A careful consideration of the available evidence makes it clear that the share system has been widely adopted by the landlords as a means of getting higher rents on their better soils or on irrigated lands; the customary share is usually double what a fair rent should be and leaves to the tenant less than a reasonable estimate of his costs of production.

The result is that the return obtained by the share tenant for his labour is less than that of a daily labourer. On the continent of Europe a system called *meteyar* involves a share rent but there the landlord provides almost everything except the labour of the tenant and his cattle; of this system it is said that "the *meteyar* will, if left to himself, cultivate less intensively than a cash tenant, because (says Marshall) when the cultivator has to give to his landlord half of the return to each dose of capital and labour that he applies to the land, it will not be to his interest to apply any doses the total return from which is less than twice enough to reward him. The advantages of the system outweigh the disadvantages only in cases where the farms are small, the tenants poor and the landholders willing to supervise the cultivation of the land in person." (1)

One important factor influencing the figures for tenancies is the increase in the number of mortgages. 3,116,000 cultivated acres or about 10.5 per cent. of the whole cultivated area were under mortgage in 1920-21; the figures for 1931 are 3,482,000 or about 11.5 per cent. and for 1934, 3,710,000 or 12.1 per cent. The number of mortgages has increased from 1,400,000 in 1921 to 1,608,000 in 1931. As the mortgagor is, in the great majority of cases, entered in the records as tenant cultivating under the mortgagee, the number of tenants tends to increase with the number of mortgages (2).

The outstanding fact in the above is that half the cultivated area of the province is held by tenants-at-will with only conditional freedom to carry out improvements, no fixity of tenure and imperfect protection against enhancement of rent or eviction if they increase the productivity of their fields by sinking capital in them (3). The proportion of tenants to owners varies with

(1) O'Brien : *Agricultural Economics*, p. 88.

(2) Figures are taken from the Land Revenue Administration Report for 1920 and 1931. The average mortgage, it will be observed, is for about $2\frac{1}{4}$ acres declining to 2, and paying Rs. 3 land revenue. It thus appears that the land under mortgage is about (but not quite) average quality, also that not more than 35 per cent. of the owners can have a mortgage.

For information as to the increase in mortgages see the discussion on the Abuse of Rural Credit.

(3) The Tenancy Act allows a tenant-at-will to make an improvement with the assent of his landlord; if he can prove this assent he cannot be ejected and his rent cannot be enhanced until he has received compensation for his improvement. But local conditions make it very difficult to prove assent.

the community. In 1872-73 it was noted that amongst Sikhs, who had a short time before been the masters of the province, there were 100 proprietors to 23 tenants; amongst Muslims owing to the large owners in the western districts, there were 100 proprietors to 61 tenants. The Hindus come in between with 100 proprietors to 53 tenants. More recent figures do not seem to be available. But, comparing the four districts on the east (Hissar, Rohtak, Karnal and Ambala), where 74.3 per cent. of the population are Hindus and only 25.3 per cent. Muslims with the four districts on the west (Rawalpindi, Attock, Mianwali and Muzaffargarh), where 12.3 per cent. are Hindus and 87.2 per cent. Muslims, it is found that the cultivated area is held as follows:—

	Owners.	Occupancy tenants.	Other tenants.
East	.. 53 per cent.	11 per cent.	36 per cent.
West	.. 48 per cent.	11 per cent.	41 per cent.

Of the cultivated area in the more central districts, the proportion cultivated by the actual owners is 48 per cent. in Amritsar, 44 per cent. in Lahore, while in the Muslim district of Gujrat the proportion rises to 56 in Gujrat Tehsil, 61 in Kharian and 60 in Phalia. The large proportion of tenants among Muslims is thus due not to religion, but to the number of large estates in the Muslim districts along the Indus.

The proportion of the land cultivated by the owners is said to be 35 per cent. in Belgium, 86 per cent. in Germany, 88 per cent. in Denmark, 47½ per cent. in France and 12 per cent. in Great Britain (1). In Japan the proportion appears to be about 53 per cent. There seems to be a distinct tendency for tenancy to increase in other countries than the Punjab. It has certainly increased in England with the disappearance of the yeoman farmer (2), it is increasing in Belgium, and in the United States, where its economic and social effects are described as the central phase of the American land situation. The chief cause is the increase in land values which serves to prevent tenants from having enough to purchase their holdings. With the exception of England, where the relationship between them and their landlords is, perhaps, the best in the world, the desire to acquire rights of ownership seems to be general.

why rise in the value of land.

(1) Rowntree: *Land and Labour: Lessons from Belgium*, pp. 113, 114. The figures are not recent ones. But, in another way, in France 77 per cent. of the farmers, in Germany 83 per cent. own all or a part of their farms. In the United States 38 per cent. of farmers are tenants Cf. Gillette: *Constructive Rural Sociology*, p. 220.

(2) But the extensive sales of land since the war seem to be leading to an increase of cultivating ownership again; the old tenants are making great, and not always wise, efforts to purchase.

Of the effects of tenancy in the Punjab it is more difficult to write. Before the first edition of this book appeared, careful inquiry was made through the staff of the Co-operative Department into the question of tenancy *versus* ownership, and since then this has been supplemented by the publication of several detailed village surveys by the Board of Economic Inquiry and by personal investigation. There is a considerable amount of unanimity in the results but more research is still required on some aspects of the question.

In order to appreciate the value of the information collected it must be remembered that in the central and east Punjab, most tenants are also owners in the same village and so have a clear choice between the land owned by them and that taken on rent; when it comes to dividing their resources between the two areas the former naturally takes preference. Further, long practice, amounting now to custom, has decided that an area of from twelve to fourteen acres is the size that can be cultivated by a man with one yoke of oxen; an owner with more than this tends to rent out the excess above 14 acres; while one owning less tries to get more on rent. In general, it may be said, that in this part of the province there is no large tenant class who own no land at all. In the west, there are large owners who let practically the whole of their land to tenants, and there a distinct tenant class exists. This class is generally poor, lacking in resources and careless in cultivation.

In general the occupancy-tenant differs in his operations little from the owner, and his case need not be further discussed; he enjoys complete security of tenure and can improve his land without any fear that his landlord will deprive him of the benefits by ejecting him or raising his rent.

The lessee for a term of years is not an important feature outside the colonies, but where he exists he puts more labour and capital into the land than an owner. The extreme case is that of the British Cotton Growing Association and other big lessees in colony areas who lease land for a term of years and by a generous expenditure of capital and labour manage to secure outturns considerably higher than permanent holders near by. Tenants on cash rents or holding land on condition that they pay cash rents on certain crops only, put in more labour, more ploughings, more manure and more care than tenants on share (*batai*) do, or than the same tenants do on their share-paying land. Where a cultivator owns a few fields and holds others on share rent, he puts his manure on to the former, giving the latter little or none, generally none.

There seems to be little doubt that a tenant on a share rent ploughs less often than an owner, manures less and gets a smaller

*the Montgomery Percentage of Cultivation
is greater on land let on short term ten-
ancy than on long term because
attention to farms is not fully paid.*

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outturn. He is less willing to try improved seed or implements. But even a share tenant seems to do better than a hired labourer. A family of tenants on share rent with ample labour for their holding will work harder and get better results than an owner working with hired labour. In the Punjab there is no landlord-tenant question; ejectments are rare, and complaints of disturbance without reason are few, so that even a share tenant holding from year to year may rely with confidence on being left in possession for a term of years if he so wishes. He is, as has been stated, usually an owner in the village, and he means to stay in it. In Burma, the majority of tenants do not stay on the same land for any length of time; relations between them and their landlords are bad and each tries to cheat the other. The Director of Agriculture of that province informed the Royal Commission on Agriculture that the year to year tenant sees no reason why he should conserve his manure and will even throw it away rather than put it on his land. He had actually found cases where such tenants purposely built their cattle-sheds on the edge of a creek so that the manure, which they considered to be a nuisance, could easily be dumped into the stream.

The psychological effect of security of tenure may be illustrated from the colonies where it is reported that in Montgomery the percentage of failure (*kharaba*) is greater on land let for a short period on temporary cultivation than on the land permanently allotted, this though partly due to the soil, is also a result of the greater attention given to husbandry on the latter area (1). On the whole it would appear that the best cultivation is done by the self-cultivating owner or occupancy tenant, next by the share tenant and worst by the hired labourer. In other words, there is a strong suggestion that the standard is affected by the share which the cultivator himself is to get from the result of his labours, and further that it is easier to rack-rent a tenant than to extort good work from a labourer with little interest in the yield.

It follows from what has been said above about cultivation and manuring that where a cultivator owns part of his holding and rents the rest, he puts his more valuable crops, such as sugar, cane, cotton, etc., on to his own land, and the less valuable on to land whose yield is to be shared with his landlord. Owners who rent out part of their land keep for their own cultivation lands best suited for the more profitable crops, and let the inferior fields. The result is a difference in the cropping on land owned and held on share rent. Fodder is an example: the landlord often takes a smaller share of fodder crops than of grain, and so the tenant will put more land under fodder, and if he is also an

owner he will grow his fodder on the land rented and his commercial crops on his own. It could hardly be expected that anyone with the choice open to him would grow his more valuable crops on land from which he had to give a share to another. How far these tendencies affect areas under crops is uncertain; rotation is much a matter of custom and no evidence is known to the writer which would indicate that tenants practise a different rotation from owners. Further, in large tracts the share system does not apply to the valuable crops such as sugarcane, which often pay a cash rent.

It should hardly be necessary to point out that tenants without security of tenure do not plant perennials such as fruit trees, gardens, etc. Even the ordinary trees are not wanted by tenants, they are not allowed to cut them for firewood or household purposes without the consent of the landlord; they object to the shade cast upon the crops, and they take no care of them. In the colonies, it is reported that there are fewer trees on allotments given to tenants than on those permanently occupied. In Kangra, the tea is put down by the owner. The obvious exception to the above is, of course, cotton, which is really a perennial though almost everywhere grown as an annual and treated as such.

Perhaps the most serious aspect of tenancy is its effect on the improvement of the soil. It has been said of England that the discouragement of improvements by tenants in the past did more than anything else to hinder the spread of good agriculture, and in the Punjab tenants-at-will practically do nothing to improve their holdings. The most common improvement, the irrigation well, is not practicable, and even the smaller works such as earth ridges to keep the rainfall on to the field, or the levelling of land are not encouraged. A landlord will eject a tenant if he thinks the latter is going to make improvements which will lead to claims for compensation later. Such works as are done by private effort are constructed by owners, such as the water channels or *kuhls* in the hills, wells, and private canals. It is even alleged by some that the improvement of land is hindered by the fear of an enhancement of revenue years later (1); if so the prospect of having to share the benefit with the landlord immediately is ample reason for the tenant's universal abstention from sinking capital in the soil.

Whether tenancy has any marked effect on the number and quality of cattle kept is somewhat doubtful. Owners, being generally better off than tenants, often keep better oxen and take pride in their welfare; also they keep more buffaloes and so

(1) This calls for separate treatment, see Chapter III. It is interesting to note that the Industrial Commission pointed out that owners do not invest savings in the improvement of their land in the occupation of their tenants.

have more manure for their lands. It is not so long ago since a man's cattle were more valuable than his land, when an ox was worth 30 to 40 rupees while an acre of land was worth ten to fifteen rupees. The value of land has risen higher and faster than that of cattle, so that to the owner it represents the greater part of his wealth; but the tenant who cannot afford to buy land can still own good cattle and can use them as a source of income from *ghi* or carting where the bigger owner might scorn to do so. It is said that the use of male buffaloes for carting or ploughing is the mark of the tenant, as owners who can afford to do so use oxen only. Further inquiry is necessary before it can be definitely stated that widespread tenancy is an obstacle to cattle improvement.

In regard to housing, the matter is more one of comparative wealth than of land tenure; the large owners have houses which no one could mistake for those of poor tenants, and in the west where there is a large population of tenants their houses are distinctly inferior to those of the owners.

Tenants do not own the site of their homes and so are not able to sell the house complete, they use rougher wood, less brick and have smaller sites. It may be said that roughly the standard of houses follows the sliding scale from the big owner through the various stages of owner tenant to the pure tenant with a temporary hovel.

In the colonies the permanent grantees are allotted large sites for house and cattle sheds, while their tenants get smaller sites, and as the latter are temporary only their dwellings are miserable shacks when compared with the fine and well finished houses of the permanent colonists.

In the matter of education, there is a fairly distinct difference; the larger owners are educating their children while the tenants seldom do. In between there are the usual gradations, those who can afford to dispense with the child's labour send him to school, while those who need him to look after the cattle and goats do not send him at all or withdraw him when still in the lower classes of the primary school. Tenants' children seldom go beyond the primary stage. Although primary education for agriculturists is free there is considerable expenditure required for books, stationery, etc. In spite of all that has been done to adapt the curriculum to the needs of those working on the land, there is still practically little faith in education as an aid to agriculture, and none whatever in its value as a condition precedent for the production of better crops. Where a youth receives education he is apt to regard himself as unfitted for cultivation; in the opinion of some the life within the shade of a school softens the boy and makes him ill-able to withstand the intense heat of

the Punjab sun. It is seldom that an "entrance pass" is found driving the plough, and he does his best to find a career outside the village. At the other end of the scale the son of the poor tenant is willing to seek his fortune in the colonies or in the army. The tie of ownership is very strong and the small proprietor, with no co-sharer to take charge, finds it difficult to leave his village even for land in the colonies, especially where residence is a condition of a grant: no such tie holds a tenant-at-will.

There is another well marked difference between owner and tenant where the latter is not a proprietor and that is in creditworthiness; the moneylender has too willingly advanced to the owner until the majority are in debt; but the tenant has no such good security to offer and is less involved in consequence; he is therefore more thrifty, more careful over expenditure and less litigious. His dignity does not prevent him from adding to his earnings by labour, carting, or non-agricultural occupation in the nearest towns. Formerly tenants sold their *ghi*, but with the increased prices following the war they found themselves able to keep much for their own consumption. The shortage of *ghi* seems to be due to greater demand rather than to reduced supply in the province as a whole, but the new demand comes in part from the tenant's home and the supply to the towns is thus diminished. How the recent depression has affected this situation is not yet clear.

There seems to be a distinct difference in the matter of joining co-operative societies; the larger owners have never shown much interest, as the credit societies were never intended to meet their requirements; the smaller owner joins freely, but the tenant does not. Partly because he has less use for capital and is not accustomed to borrowing, partly because the owners hesitate to admit him on the basis of equality with themselves, and partly because his mental outlook is too narrow to enable him to understand the advantages of co-operative effort over a long period. He is not a co-sharer in the village common, and perhaps does not believe that he can be an equal co-sharer in a village society. However, as the ideals of the movement are becoming more familiar tenants are joining more freely. In the colonies where the tenant-at-will has no secure position he is hardly a fit subject for membership of a society with unlimited liability.

To sum up the argument thus far, it may be said that over half the cultivated area of the province is tilled by tenants, and that this area tends to increase steadily. These tenants generally take less care in preparing the land for crops, plough it less often, manure it less and use fewer implements upon it than owners. They grow less valuable crops, especially avoiding those requiring the sinking of capital in the land; they make little or

no effort at improving their fields; they often keep a lower type of cattle; they avoid perennials and bestow no care on trees. They show a stronger disinclination than even small owners do to have their children educated, and have not yet grasped the importance of organizing themselves for the more profitable conduct of their industry. The system of paying a proportion of the crop as rent (*batai*) accentuates most of these tendencies and militates against a proper rotation of crops; this system is steadily supplanting cash rents.

The evil is increased by the high price of land, which is rising faster than rentals and so making it not only impossible, but unprofitable, for tenants to become owners; while mortgages and sales are steadily adding to the number of fields cultivated under tenancy conditions.

It is not possible to give any accurate idea of the extent of the evil as a considerable number of tenants are owners of a adjoining plots who have exchanged cultivating possession with other owners, and others are cultivating their own lands under mortgagees. Moreover it is not known to what extent tenants migrate from plot to plot or from village to village, or to what extent they till the same fields semi-permanently. Tenancy itself is not necessarily an evil; most of the farms in England are given on short (yearly) leases to tenants, who do not seem to desire longer ones. In Scotland leases run from 7 to 19 years, many being for 14 years. In Wales, again, yearly agreements are general. But of these three the year to year tenancies prove in practice to be the longest. In England a year to year farmer will occupy the same farm for a lifetime, whereas in Scotland one who had taken a farm on lease for 7 or 14 years would leave at the end of his period. The arguments for and against occupying ownership, long leases and yearly tenancies are interesting and deserve careful consideration in this province where it may be thought that the simple remedy for the evils of tenancy described above is a Land Purchase Bill similar to that which converted Irish tenants into proprietors. The problem of tenancy in Ireland, however, was complicated by landlords who had insufficiently recognized the obligations of their position and by a peasantry who had preserved a feeling of ownership in the land which they had so long occupied and from the rights in which they regarded themselves as having been unjustly expropriated. The remedies for the evils of tenancy asked for and granted were fair rent, fixity of tenure and free sale of tenant right. The British farmers desire not fixity of tenure, but security of tenure. American farmers have always assumed, as a matter of course, that it is better to own the land upon which they work, because, in the first place, the rise in the value of land is considered as part

Deciding on the best

of the land

of the profits of farming, and, in the second place, no intelligent system of leasing land has been put before them. "We have not," writes Professor Carver, "worked out the problem of a system of tenancy which is attractive to a progressive and far-sighted farmer. Our system of short leases is about as well calculated to stifle initiative and enterprise as anything could well be. The interests of the landlord are so poorly safeguarded as to make it hazardous for him to let his land on a long lease. And yet the best agriculture in the world is carried on under the tenancy system" (in England) (1). If the land should decline in value the disadvantages of ownership are obvious. The British farmers are fully alive to this danger. After the war, largely owing to heavy taxation, land in the United Kingdom was sold on an extensive scale and tenants were tempted to buy their holdings to secure possession of their farms. They did not want ownership, but security of tenure, and acquired the former to preserve the latter. The result was that many crippled themselves in the carrying on of their industry by investing all their capital in the land, and not in the stock and farming requirements. Where, as in England, the rent is so small in proportion to the price as to represent a low rate of interest, it is better for a capable farmer to pay rent and to invest his available capital in livestock, machinery, etc., which will yield him a higher return (2). Perhaps, in the Punjab, where so little is done towards expending money on improved agriculture, it may be difficult to realize that a British farmer is estimated to employ on the average from £15 to £25 (Rs. 150 to Rs. 250) per acre, apart from the permanent equipment, in buildings, drains, fences, etc., which is usually found by the landlord. On small holdings up to five acres, the capital used by the tenant is estimated at £17 per acre, while his rent would be about £2/10 per acre, or Rs. 225 capital per acre and thirty-three rupees rent. The figures are high because such small holdings are generally cultivated very intensively.

The argument against farmers owning their own lands in England is that it fixes the size of the farm. Under a tenancy system a farmer may begin on a comparatively small scale with, say, 100 acres, and, if he prospers on that, he can expand his holding to 200 acres. Assuming that he is saving money as a result of his energy and skill, he would naturally desire to invest these savings in his own business, and as time went on he would desire to take up more land for this purpose. The tenancy

(1) *Principles of Rural Economics*, p. 226.

(2) *Of Carver*, p. 230. The evidence given before the English Royal Commission on Agriculture, 1919-20, on security of tenure, leases and sales is briefly summarized in the following pages.

system thus provides a "ladder" by which the enterprising and energetic small farmer or even a labourer (1) can rise to be a large farmer.

The arguments in favour of long and short leases depend on the security of tenure promised or guaranteed. The Scotch long leases are said to lead to a higher type of farming than is found under the short lease system of England, but there is a tendency during the last three years or so to exhaust the soil of its surplus fertility. This tendency is largely counteracted by the excellent relations between landlord and tenant, and especially by the landlord's willingness to renew the lease to a good tenant. For the English system it is claimed that it is more elastic, that it does not bind a farmer to go on paying a high rent during periods of low prices, while a good farmer can always rely on lenient and just treatment from his landlord. English farmers urge that a long lease induces the tenants to spend more upon improvements, for which he may not get adequate compensation.

In both cases, the sense of responsibility shown by the landlords of the old type plays a large part, and it is admitted that if the new type, that is now buying up land, acts in a purely commercial spirit, it will be necessary to give the tenant better protection. The successive Agricultural Holdings Acts have been framed to give security of tenure, but not fixity of tenure, nor even fixity of rent and, of course, no hereditary right such as the Punjab occupancy tenant possesses. The landlord's right to possession of his land is not disputed but the law now ensures to the tenant compensation for his unexhausted improvements and also for unreasonable disturbance due to a landlord's refusal to renew his occupancy. The farmers' representatives would estimate the compensation at from one to four years' rent. As to rent, reasonable farmers admit that it must to some extent follow prices. As they desire a reduction when prices fall, they admit the justice of an increase when prices rise. In the foregoing the problem has been discussed from the point of view of the actual cultivator. The landlord's view differs but little. But it is important to note that one eminent authority disagrees with the view that mere security of tenure to the sitting tenant will ensure a progressive improvement of agriculture. In his opinion, if there is no competition for land, rents will be low and tenants will make a sufficient income by cheap methods. Competition for farms will force up rents and so stimulate enterprise and a high type of farming (2). The argument is mainly theoretical as in most of England there are always

(1) Cf. also *The Agricultural Output for England and Wales* for statistics for rent, capital and outturns.

(2) Sir A. D. Hall: *Agriculture after the War*, p. 64.

many applicants for vacant farms, and the statistics for outturns for forty years suggest that the variations are due to the seasons, to the difficulty in getting artificial manures during the war and to variations in acreage, poor land put under wheat during the war gave low yields and has now been restored to pasture. From the above it will be clear that it would be incorrect to regard the abolition of tenancy as the remedy for its ill-effects. Even a yearly tenancy is quite compatible with a high standard of farming, provided either that the landlord recognizes his responsibilities to his land and its cultivators or the law protects the tenant from the idiosyncrasies of one who does not. A proper partnership between the two is essential and it is appreciation of this fact that leads an American writer to say that experience indicates that a good tenant system cannot be made by law(1), and he may be fortified in his opinion by the frequency with which the Act relating to Agricultural Holdings has been amended.

Applying the arguments of the above discussion to the tenancy system in the Punjab, it would appear that the best remedy for the present situation lies in stimulating amongst the tenants the spirit of competitive enterprise. They require to be firmly imbued with the idea that a proper holding for a tenant is not 8 acres or 12, but 50 or 100, and that command of the larger area may be acquired by outbidding others for its hire. To pay the higher rent they must bring to bear more energy, better skill and trained intelligence. The best service the graduates of the Agricultural College could render their country would be to pioneer this movement, and, by this means, to oust from the land those who are least fitted to cultivate it. The plea that distress would thereby be caused requires little consideration. Many now occupying the land derive but a miserable subsistence from it. They could probably do better for themselves by supplanting those foreigners who at present fill the market for unskilled labour, or by recruiting themselves in the new industrial movement. Such a movement, of course, assumes that there is in the province, or can be produced, a body of men prepared to put forth the exertion required to cultivate the larger area. At present, as has already been noticed, the tendency is to reduce the area cultivated if the same profits can be obtained from a smaller area. The growing demand for a higher standard of living should operate to counteract this, but it will be some time before the real competition for land between cultivators of varying capacities will serve to stimulate the less efficient to improve their methods.

(1) Gillette: *Constructive Rural Sociology*, p. 223.

CHAPTER XI

THE PRICE OF AGRICULTURAL LAND

*Rise in price a modern feature—insecurity in the past—
anxiety about transfers—the emergence of the capitalists—land
formerly almost unsaleable—effect of the revenue demand—communi-
cations—and canals—increase of transfers—and of price—which
still continues—decline in the burden of land revenue—effect of
fragmentation and consolidation of holdings—factors making for
reduction of price—the smallness of the areas sold—comparative
rarity of sales—evil effects of the rise—on mortgages.*

One of the most conspicuous features in the economic history of the Punjab has been the rapid and continuous rise in the price paid for agricultural land. This rise has had a marked effect on the development of the province; it has attracted the lawyer, and middleman class in general, as well as the cultivator, to invest their money in purchase, rather than improvement; it has tended to encourage gambling in a future rise, which has appeared more important than increased production; it has led to the enactment of special legislation, which, in turn, has been used as a political grievance suffered by a class who abstained from acquiring property when it was cheap; it has supplied the basis for a facile credit which has brought immense harm to a population insufficiently educated to understand its dangers; it has served to encourage tenancy and to hinder the tenant from rising to the position of proprietor. To it can be traced not a little responsibility for the economic backwardness of the province, for it has drawn into land investment many crores of rupees which, but for the hope of further rise, might have been forced into industrial enterprise or put to more productive use. It has made the land too attractive as a source of investment, but it has yielded little advantage to the cause of agriculture as a whole.

The subject is possessed of such great importance, and it is beset with so much misapprehension, that it seems desirable to discuss it in detail.

In the Punjab it is quite a modern feature. Prior to the advent of the British rights in land which now are recognised as

proprietary or quasi-proprietary, were found under earlier rulers in one or other of two typical forms—the right to collect the revenue due to the State; and the right to hold certain land on condition of payment of the revenue due upon it, either to the State direct, or to a farmer who enjoyed the first form of right(1).

Of the holders of the first form, some were recognised by the early British Government as superior proprietors (*e.g.*, the Talukdars of Oudh), in which case the actual cultivators have become inferior proprietors; others were recognised as full proprietors (*e.g.*, the great landowners of Bengal), in which case the actual cultivators have been given the status of tenants. The first form of right was not really a right in the soil, but a right in the revenue derived from it, the Kardar or the revenue farmer collecting more than he paid to the State(2).

1/2
1/3
The second form of right was clearly of no value to anyone except to the actual cultivator. The State or the revenue farmer to whom he paid the revenue, had to leave to him at least so much of the produce of his labour as was necessary to keep him on the land; but it was no object of the State or the farmer to leave him any more than this; the demand of the State or the greed of the farmer resulted in the taking of the whole profit of cultivation. Indeed the half gross produce taken by the Khilji dynasty must have left the cultivator less than a fair return for his labour; the one-third of the produce taken by Akbar afforded opportunity to the collectors to exact a little more for themselves. The cultivator in such circumstances could pay no rent separate from the revenue, there was no room between him and the revenue receiver for anyone living on rent alone. The person who paid the revenue had perforce to be the actual cultivator. As the cultivator was left with nothing beyond a bare subsistence whatever right he possessed in the land was of little value; if anyone wanted land to cultivate he could break up the waste and so would not be likely to offer any price for a right that was of so little worth. In the Punjab where the revenue demand fell on a village community, and not on the

(1) Under Sikh rule the more powerful Kardars freely took land away from one party and gave it to another who promised a larger revenue. They acknowledged no right as against the State. A proprietary right is of little, if any, use if it cannot be enforced. When a ruler made his own laws, if he asserted a right and could enforce that right, he is correctly regarded as possessing the right which he claims. The writer of this book has found no trace of any rights in land against the State or ruler. The ruler certainly recognised rights but not as against the exercise of his arbitrary whim.

(2) The jagirdar of the present day has a right to the revenue assessed by the State, and to no more; he has no proprietary right in the land from which he derives his jagir unless this happens to be his own quite independently of the jagir.

individual, it was not at all uncommon for this community to persuade others to come from outside to cultivate the waste and lighten their burden by sharing it. Abandonments of whole villages, owing to the revenue demands being excessive, or to political changes, were not infrequent. Sometimes a man of enterprise would obtain, on payment, a grant from the State to cultivate a certain area of land, in which case he might, on the strength of his grant, claim superior rights to the existing cultivators, or he might introduce his own. These in turn might later on oust him and become proprietors. There was little fixity of tenure and little of any value to attract a purchaser, had any such been forthcoming. It is unnecessary to discuss here to what extent, if at all, Hindu law ever prevailed in the Punjab. The whole spirit of that law is opposed to the idea of an individual controlling ancestral property and it is very doubtful if it included the idea of free sale. The Mohammadan invaders were not agriculturists but pastoralists; they lived on their flocks and counted their wealth by these movable possessions. In so far as they have now any customary rights in land, they have imbibed these from the Hindus amongst whom they settled or from whom they are descended. There is ample reason to believe that, prior to the British entry into the Punjab, sale of land was rare; it certainly had little sale value away from the towns. Instances may be quoted of transfers close to large towns, or of the sale of an improvement like a well, such as Sir Edward Maclagan discovered around Multan, but the whole history of the province for five hundred years previous to annexation militates against the ideas of permanent tenure⁽¹⁾, of rights of any value and of the sale of those rights. In those disturbed days it is doubtful if many people possessed any savings or would acknowledge their possession by purchasing land.

Under the Sikh régime, when "the cultivator ploughed with a sword by his side and the Collector came for the revenue at the head of a regiment," land, except in the immediate neighbourhood of big towns, was practically unsaleable. Prior to the mutiny transfers were almost unknown, and in some parts of the province sales do not appear to have occurred before 1868. The

(1) For an interesting account of land tenures in an early period, see Moreland: *The Agrarian System of Moslem India*. That the ordinary peasant was in constant danger of having his holding taken from him is illustrated by Jahangir's order that officials and jagirdars should not forcibly take the ryots' lands and cultivate them on their own account.

In Rumania, until very recently, owing to ignorance of the peasants and the absence of any system of registration of title, it was practically impossible to obtain a good title to land. There were always numerous persons claiming an interest in each piece of land. (*Vide* F. O. Pamphlet.) It is not easy to conceive of free sale without some form of registration of title, however primitive.

province, it will be remembered, was annexed in 1849. It was looked upon as a country of deserts and barren wastes and its addition to the Empire was regarded as merely another burden upon the already depleted finances of the Government of India. With the introduction, however, of settled law and order, fixed moderate assessments and security of right and tenure, the Punjab embarked upon a remarkable career of prosperity which has continued, practically without interruption, down to the present day.

As already remarked, prior to 1857 sales of land were comparatively rare; but, shortly after, they began to attract notice, and by 1872 the increasing volume began to cause disquiet to Government. It is of special interest to note that in the districts with more regular rainfall the money-lenders preferred a mortgage to a sale; ownership to them at that time would have been an encumbrance. Where the summary assessment pressed too severely, the zemindars are described as suffering privations; they sold their cattle to the Sahukar, and they *deserted* their lands for neighbouring districts where the Government demand was lighter. They did not *sell* their lands; but where there was a well they might sell that. The Report on the Punjab Famines of 1860-61, and 1869-70 do not mention that owners sold their land. In Gurdaspur, in 1871-72, 66.5 per cent. of mortgages were in favour of money-lenders, while 63 per cent. of the sales were to agriculturists. In the districts of precarious rainfall the money-lender could not become an economic factor till much later, and mortgages were rare, and sales represented the common form of transfer; but most of these sales were to other owners.

The Punjab is essentially a province of petty peasant proprietors. The great majority of owners possess less than ten acres, although many of these hold a few acres more on rent. The agricultural tribes are generally distinct, easily defined bodies, possessing valuable martial qualities which endow them with considerable political importance. To secure their contentment and prosperity has for nearly seventy years been the main object of the administration. Their expropriation by tribes of non-cultivating capitalists would obviously have proved a grave source of embarrassment and the Annual Land Administration Reports testify to the solicitous care with which the Punjab Government watched the rapid increase in sales of land by the hereditary owners to money-lenders and grain dealers. The prolonged official anxiety finally led to the passing of the Land Alienation Act in 1901. Throughout this period, however, the continued rise in the price of land was regarded as a matter for pride and congratulation, and no doubts seem to have arisen as to whether this process had not continued past the limits at which it could

be viewed with complacency(1). It is this question which forms the subject of this chapter. Undoubtedly the efforts of the British administration to confer on the agriculturists all the requisites of a prosperous peasantry were the initial cause of the rise in price. Reduction of the revenue assessment, preparation of an accurate record of rights and the legal protection accorded to these rights, affording security of title and freedom from disputes, together with a system of cheap transfer, all gave land a market value.

Where the right in land was the first of those described above namely, a right to collect revenue, on payment of a fixed sum to the State, the new administration accepted the revenue farmers as superior proprietors, and increased the value of their right by limiting the State demand for revenue and even reducing it. At the same time no restriction was imposed on the amount demanded from the actual cultivator. The major portion of the province, however, was in the possession of the communities holding the second form of right, namely, a right to occupy and cultivate subject to the payment of revenue. Almost everywhere the early settlement officers reduced the revenue, with the result that, instead of the State taking the whole of the profits of cultivation it takes, in theory a quarter, and in practice a smaller proportion(2). Thus for the first time the cultivator began to find himself left with a margin of profit over and above what was previously left for his subsistence. This margin of profit obviously possessed value and could be an object of sale. In Bengal the Permanent Settlement Regulations of 1793 and 1795 conferred upon the great zemindars the full and unfettered power of alienating their

(1) Mr. Thornton in the Governor-General's Council on the 16th February 1878 said: In the year 1859, when I had the honour to hold the post of Secretary to the Financial Commissioner, Punjab, the average selling price of revenue paying land was a little more than four years' purchase of the assessment; in 1868-69, ten years later, the average selling price of land was 18 years purchase of the assessment; in 1873-74, or four years later, it was 28 years and by the last return, that for 1875-76, it was 30 years purchase of the assessment.

(2) See Sir James Wilson's Paper on Recent Economic Developments in the Punjab (written in 1910):—

"All land in India has from time immemorial been liable to pay a share of its produce to the ruler for the time being.... When the Punjab came under British rule this share must on the average have absorbed at least one-third of the gross produce of the agricultural land of the province.... At first, the general standard of assessment was, roughly, one-sixth of the gross produce, or about half the share taken by the Sikh Government... the actual assessment has not in recent years kept pace with the rise in prices..... In 1889 the average assessment was just under one rupee per cultivated acre; it took 40 lbs. wheat to pay the land revenue of an average acre; on the average of the last nine years it took only 29 lbs. to pay the present average land revenue per acre..... It now only takes 4 per cent. of the gross produce of the average acre to pay the land revenue on the land."

No Famine Commission has reported that the land revenue is too high. The Commission of 1880 estimated it at from 3 to 7 per cent. of the gross produce, the highest being 8 per cent. The Commission of 1898 estimated the land revenue of Hissar at $3\frac{1}{2}$ per cent. and of the Punjab as a whole at 7 per cent. of the gross.

lands without the sanction of Government. The idea gradually spread through Northern India, and, though transfer was discouraged in the Punjab, the right gradually established itself. Thus there were two factors at work. The State demanded less than the cultivator had been accustomed to pay and so left in his hands a surplus; it was open to a middleman to step in, buy up the proprietary rights, take from the cultivator what he had previously paid and keep the surplus for himself. This surplus would then be what is commonly known as rent. Along with this change there spread in the Punjab the idea that land could be sold. But, as already noticed, it was the surplus (or rent) that first attracted the money-lenders who sought to secure it by taking land on mortgage.

These two factors alone would not have been sufficient to account for what next occurred. Before land can be sold there must be buyers and these buyers must be possessed of capital and this capital must have been accumulated. Prior to annexation, the number of people with any savings must have been very limited; there was very little trade; the State, the various governors and minor officials limited their exactions only to what they thought they could squeeze out; such men as possessed wealth lived in the bigger towns under the protection of the local chiefs and showed no inclination towards the acquisition of scattered plots of land in villages.

But with the advent of British rule there was established all the paraphernalia of a civilised administration. Regular cantonments were constructed and garrisoned by troops receiving regular pay; public works were put in hand and the labour was paid for in cash. There arose markets for produce and opportunities for traders to earn money by supplying the needs of those in public employment. The cultivator was not the only person who, under the new régime, found himself in a position to save.

In 1869-70 the average price paid for over a hundred thousand acres was Rs. 10 per acre, equivalent to 18 times the annual land revenue. By 1875-76 it has risen to Rs. 20 per acre or 31 times the land revenue. This rise was probably connected with the heavy export of grain to famine-stricken Madras. In the next few years the province experienced short rainfall, and bad crops, the area sold increased and the price fell to Rs. 17 an acre. The effect of the reduction of the assessments was to bring the price in 1882 to what was then regarded as the "unprecedented multiple" of 36 times the land revenue(1).

The extent of this reduction of assessment may be illustrated by the following figures showing the Government share of the

(1) Or 18 years' purchase, a stage reached in England about 1600-1688 Curtler, p. 117.

Early assessments were 2% of
gross produce without any allowance
or deductions 217

proprietary produce in India as a whole (1):—

1812	..	91 per cent.	1844	..	67 per cent. of the average antici-
1822	..	83			pated net assets.
1833	..	70—75	1855	..	50
			1875	..	50 of the existing assets.

The early assessments seem now incredibly heavy; they were inherited from the predecessors of the British who claimed one-half to one-third of the gross produce without any allowances or deductions (2). They obviously left no such surplus as would be sufficient to give a right of transfer any value.

As many readers may not be conversant with land revenue matters the following details are given showing for three different periods the average land revenue assessed per cultivated acre.

District.	1890.	1900.	1930.
	Rs. a. p.	Rs. a. p.	Rs. a. p.
Rohtak	1 0 8	1 0 0	1 11 0
Karnal	0 15 7	0 15 10	1 10 7
Jullundur	2 2 3	3 4 9	3 0 9
Ferozepore	0 8 0	1 6 1	1 2 3
Amritsar	1 5 7	2 7 4	2 2 9
Gujranwala	0 13 7	1 11 1	1 15 6
Gujrat	0 12 10	1 0 3	1 13 8
Jhelum	0 10 10	0 11 6	1 2 3
Muzaffargarh	1 5 7	1 9 8	1 5 1
Dera Ghazi Khan	0 10 11	0 8 3	0 15 1

(1) The Court of Wards Report for the year ending September 1919 shows that land revenue and cesses amounted to less than 15 per cent. of the income derived from rents and sale of grain. In some cases it was less than 5 per cent.

The percentages that follow are taken from official reports.

Sir P. Fagan stated in council in August 1921 that in the Punjab the following is the proportion of estimated net assets taken in recent assessments:—

Hoshiarpur	..	26 per cent.	Jullundhur	..	21 per cent.
Ferozepore	..	20	Ludhiana	..	27
Lahore	..	22	Shahpur	..	28
Amritsar	..	25	Ambala	..	28
Gujrat	..	22	Multan	..	29

But these are safe estimates based on very cautious calculations. The actual percentages depend upon prices.

(2) Brij Narain: *Indian Economic Life*, pp. 28-29. "While India's agricultural wealth and income have increased, the share taken by the Government as land revenue has steadily decreased..... At the present time the land revenue amounts to about 5 per cent. of the value of the gross produce of the land. There is no instance of any ruler in the past, whether Hindu or Muhammadan, who took as revenue so small a share of agricultural produce.

"The laws of Manu permitted the king to take 'the eighth, sixth, or twelfth part of the crops,' while a Kshatrya King, who, in times of distress, took even the fourth part of the crops, was not blamed. There is a reference in Kautilya's *Arthashastra* to 'taxes that are paid in the form of one-sixth of produce.' The Muhammadan rulers of India sometimes took as much as half the gross produce of the land. Ala-ud-Din Khilji, according to Ferishta, 'ordered a tax equal to half the gross annual produce of the lands to be levied throughout the kingdom and to be regularly transmitted to the exchequer.' Akbar the most enlightened Muhammadan ruler, fixed his demand at one-third of the value of the gross produce of the land."

Other factors which, at this time, exerted a marked influence on land prices were railways and canals. The first railway in the province was commenced in 1858 and was opened for traffic in 1861. The rapid expansion has been described in detail in Chapter VI; it is extremely difficult for the modern generation to understand what the province was like before railways spread their lines over the country. Local markets were at times so glutted that grain became unsaleable and therefore worthless. When the produce was liable to prove valueless the price of land could not rise high.

Inundation canals existed before annexation and were speedily extended afterwards. Big irrigation schemes were rapidly put in hand. The Bari Doab Canal was opened in 1859 and the Sirhind Canal in 1870. The vigorous extension of canals and construction of railways created a great demand for labour which was further intensified by the Afghan War of 1879-80. Prices rose considerably and, in spite of the severe famine of 1868-69 and the scarcity of 1877-78, the cultivating classes increased in prosperity. The railway enabled large amounts of grain to be exported to Bengal in 1873, and to Madras in 1876 on the occasions of famine conditions in those two presidencies. In 1869 the Suez Canal was opened and with the coming of the cheap cargo steamer about the same time the European market was brought into touch with the province.

This had the effect of steadying prices; there was now an outlet for any surplus; the appreciation of gold stimulated export; the producer became assured of the profits on his cultivation and so was stimulated to greater activity, knowing that in a good year he would not be left with unsaleable grain on his hands. The cultivated area increased 31.6 per cent. between 1855 and 1868 and continued rapidly to expand. Between 1855 and 1881 the population was estimated to have increased from 11,500,000 to 17,270,000 or just over 50 per cent. (1). Instead of a revenue paying community seeking for tenants to come and share their burden, there were tenants seeking for land to cultivate.

The result was a rapid increase in the number and value of transactions in land. The gross sum paid for land was 10 lakhs in 1869-70; five years later it had risen to 15 lakhs, and in 1879-80 it was 30 lakhs of rupees. That these sales were due to surplus money seeking investment, rather than to straitened economic conditions, is indicated by the fact that they were most frequent in the most prosperous districts. The money-lending buyer was, at this time, not always allowed to take possession of his purchase in peace, but, as the power of the courts increased, his policy of

(1) This is probably an exaggeration due to an underestimate of the population in 1855.

steady aggrandisement at the expense of the old landowning class was made more safe and more profitable. The tendency for agriculturists to embark on money-lending, which is in some quarters regarded as a result of the Land Alienation Act of 1901, was first noticed in the official report for 1876-77. Nearly half the land sold was transferred to members of agricultural tribes, and the eager readiness with which the farming class bought up plots in their immediate neighbourhood undoubtedly contributed to the upward movement of prices.

In the quinquennium ending with 1877-78 the average area annually sold was 93,000 acres; in the quinquennium ending with 1882-83 it was 160,000 acres; in the next it was 310,000 acres and in the following one ending with 1892-93 it was 338,000 acres. In spite of this remarkable increase in the area sold (which includes mortgages converted into sales) there was a still more remarkable rise in the price paid. In the early days land in Sirsa sold for 6 annas an acre; about 1869 the average for the province was 10 rupees. Thereafter the upward movement may be illustrated by the following figures for the province :—

Rs.

1875-76	..	Average price per acre	20 or 31	×	land revenue	
1880-81	..	"	18 or 32	×	"	"
1885-86	..	"	16 or 36	×	"	"
1809-91	..	"	30 or 50	×	"	"

The official figures now give the average rate per cultivated acre as follows :—

Rs.

1885-86	..	..	30	
1890-91	..	..	61	
1895-96	..	..	59 or 56	×
1900-01	..	..	77 or 89	×
1905-06	..	..	85 or 105	×
1910-11	..	..	124 or 127	×
1915-16	..	..	216	
1920-21	..	..	345 or 245	×
1925-26	..	..	438 or 301	×
1926-27	..	..	477 or 301	×
1927-28	..	..	368	
1928-29	..	..	372 or 261	×
1929-30	..	..	406	
1930-31	..	..	420	
1931-32	..	..	412	
1932-33	..	..	372	
1933-34	..	..	477	

The sale of land in the colonies may serve to depress the average price for the province, not as some suppose owing to a

glut in the market but because land is sold to peasant colonists at concession rates. Figures for receipts from land sold by auction and from peasant grantees acquiring proprietary rights at low rates are not separately recorded; they are, however, valuable as indicating the amount of new money (as distinguished from the change of a mortgage to a sale) available for investment. In the quinquennium (1903-04—1907-08), the amount actually received for State lands was nearly 23 lakhs; in the two following quinquennial periods it was 194 lakhs and 147 lakhs, and in the period 1918-19 to 1922-23, it was 152 lakhs. That the capacity of the market is not unlimited has been shown by the sharp drop in bidding if too much land is offered. The actual areas sold by auction (with a small area by private treaty) in the Lower Bari Doab Colony were as follows:—

Year.		Acres.	Year.		Acres.
1914-15	..	26,615	1917-18	..	62,196
1915-16	..	37,583	1918-19	..	66,654
1916-17	..	52,621	1919-20	..	69,455

In the 21 years from 1896-97 to 1916-17 about 967,000 plots of land, totalling some three million acres of cultivated land (nearly 10 per cent. of the whole), have been sold for 33 crores of rupees.

Looking at the figures, it may be said that from 1868 to 1891 the rise in price was not more rapid than might be expected to result from lenient assessments, improved communications, wider markets and other accompaniments of settled government. The continuance of the rise is more difficult to explain. It is not due to increasing density of population, for this in 1881 amounted to 514 of the total population per square mile of cultivated area, and in 1911 it had fallen to 499, due to the opening of the great canal colonies (1).

It is not due to better cultural methods or to improvements in the soil. The number of agriculturists per hundred cultivated acres has declined from 46 in 1868 to 43 in 1911, and it is believed that there has been a similar decrease in bullock-power. The question of improvement due to manuring or the introduction of clovers or root crops does not arise. In part the upward movement is due to the increase of irrigation from canals, wells, etc., from nearly 6 million acres in 1868 to over 12 million acres in 1917. The cost of the well is usually included in the price of the land. And, in any case, the expenditure of several (probably at least 5) crores of rupees on wells and of over 23 crores on canals

(1) The principal cause which acts on the value of land is the growth of population, but the mere agglomeration of population does not involve such an increase of value if it is accompanied by a lessening of business prosperity and therefore a diminution of income of the consumer and tenant. Seligman: *Principles of Economics*, p. 312.

constitutes a productive improvement that has greatly increased the value of the land. This increase is all the greater owing to the comparatively low price charged for water (1). It is important to observe, however, that the general rise in price is also marked in districts without canal irrigation and in tracts without wells.

In part the increase is due to the price of agricultural products, but the influence of this factor is difficult to estimate (2). In 1869 wheat was selling at 13 seers per rupee; it fell steadily from 1871 (20 seers) to 1877 (27 seers) and then rose sharply to 13½ seers in 1879. The introduction of an American type of cotton (4F) which has sold for high prices has to some extent affected land prices; the failure of this crop coupled with a fall in price has been followed by a fall in land prices but it is difficult to say how far this fall is due to appreciation of the lowered value of the produce or how far to a reduction in the amount of annual savings which find investment in land. The continuous steady high price in recent years due to better communications with good markets may account for part of the increased value of land in exporting districts, but it cannot have had as much effect in districts which consume their own produce. The expenses of cultivation have risen considerably. Bullocks were Rs. 35 each in 1870, now the average price cannot be less than Rs. 80; and other items have similarly gone up in price. It must always be remembered that any increase in cost of production affects the whole produce, while a rise in the price of the produce only affects the portion sold.

In this connection, however, it is important to remember that fully half the cultivated area of the province is in possession of tenants, the great majority of whom pay rent in kind. The increased expenses of cultivation fall on the tenant, while the landlord receives the full benefit of the rise in value of his share of the produce. The Government demand in terms of produce is steadily declining; thus the return to the landlord is increasing from these two causes and he is induced to purchase more and more land at a higher and higher price. The marked leniency in assessment of the Government demand is undoubtedly an important factor. In 1868-69 the demand averaged Re. 1-1-3 per cultivated acre, equivalent to about 22 to 28 seers of wheat at the average price of those years. At present it is between Re. 1-8-0 and Re. 1-10-0, equivalent to 17 seers of wheat at Rs. 3-8-0 per

(1) The average water-rate per acre is Rs. 4-2-0 while the average value of crops raised per irrigated acre is estimated at Rs. 62 but the latter, of course, is dependent on prices.

(2) For instance, in Denmark it is estimated that although as a result of very intensive cultivation, the annual value of the harvest has increased since 1870 by over 100 per cent., the price of land has only increased by 5-38 per cent. The price of produce is a factor in profits, but it is far from being the only one.

The tendency of landlords to buy land because he benefits by the rise in

the price of the produce is a factor in profits, but it is far from being the only one.

*Fragmentation in one way it
reduces price rising but in other
way it stimulates.*

maund. This latter average demand is higher in money than the earlier one, almost solely because the area assessed includes a much greater proportion than is irrigated. The increase in the Government demand on the same class of soil is actually less than the increase in prices of produce so that the real burden has been lightened (1).

One factor that might be considered as tending to restrain the upward trend of prices is the fragmentation of holdings; each holding consists of several fields and these fields are scattered all over the village area. The result is a diminution in the efficiency of the cultivator's labour as much of his time is wasted going with his bullocks from plot to plot and further time is wasted in the frequent turnings in ploughing a small plot; there is also a loss of area in the large number of boundary ridges. A further objection is that the fields are frequently too small to permit of a well being sunk with advantage. In Japan, where much attention has been paid to the matter, the official calculation is that readjustment of scattered fields will increase the yield by 15 per cent., while the unproductive areas (ridges, etc.) now utilised are expected to amount to 3 per cent. of the area adjusted (2). The success obtained in the Co-operative Consolidation of Holdings in the province has undoubtedly raised the value of the land dealt with, while it may be expected to restrain sales inasmuch as there is less hesitation in selling a small distant field than in chipping off a part of a compact holding; experience in Belgium suggests that fragmentation facilitates sale and tends to enhance prices because the small fields are within the means of more prospective purchasers.

The evidence from England is somewhat similar; there is generally a good demand for small holdings when they come on the market when there may be little or none for large farms. In England the farm buildings go with the land, so that it is not easy for an English landlord to divide the large farms into smaller ones unless he is prepared to reduplicate the buildings. The fact that in the Punjab, plots are sold free of buildings facilitates transfer.

Experience seems to show that low industrial wages tend to

(1) It seems doubtful, however, whether the influence of the leniency of the land revenue demand is not sometimes overestimated. Assuming the price of land to be Rs. 360 per acre, the land revenue to be Rs. 1-8, the value of the produce Rs. 40 and the rent to be half share on Rs. 20. Then the net return is 5-1; if the land revenue is abolished it would be 5-5; if the land revenue were doubled, it would be 4-7. The land revenue is so extremely lenient that it hardly affects the net return from the land.

(2) *Japan Year Book*, 1919-20, pp. 541-2. The smallness of a field may serve to reduce its value, but where the field is not too small for economical cultivation, its small size brings its price within the reach of a larger number of purchasers and so tends to increase the competition for it.

raise land prices. Where, as in the Punjab, half the land is cultivated by tenants, there must be a large number of these tenants who would be attracted to the towns if conditions there were sufficiently favourable (1).

High industrial wages and decent conditions of living might reduce the number of tenants seeking land and so reduce rents and, with them, land prices. High wages in towns tend to keep down land values in England, low wages in Belgium keep the people on the land. At the same time the affection of the people for the land may counteract this tendency. It is possible that high wages might attract workers who would save all they could with the ambition of purchasing a plot in their native village.

It has been stated that there are only two causes capable of checking or recovering this upward movement. The first is the competition of new land following on great colonising enterprises and improvements in the means of transport; and the second consists in some great and sudden improvement in the art of farming (2). The classic instance of the first cause is, of course, the opening up of the great American prairie lands to wheat cultivation. Between 1860 and 1880 the production of wheat in the United States trebled. Vast stretches of virgin soil were opened up with the most astonishing rapidity by rail roads. The cost of transport fell greatly, and Europe was flooded with foreign corn and meat (3). The value of land in Western Europe fell about 30 per cent; in some parts of England the drop was as much as 50 per cent., and prices had not recovered up to the outbreak of the Great War. Even in America itself the opening up of land in the Western states and in Canada led to a general steady decrease in the value of farm property in New York State, and a similar shrinkage of land values is shown by Ohio (4).

The great expansion of cultivation due to the construction of canals in the Punjab and the irrigation of what were formerly largely barren tracts does not seem to have exercised any effect in checking the rise in land value. Within the last 28 years the area under cultivation has increased 40 per cent.; the area under canal irrigation has advanced from three million to eleven million acres; in the same period the population has increased by only 5

(1) The modern industrial tendency of Japan and the migration of rural population toward cities are making it more and more difficult for the landlords to find tenants—*Japan Year Book*, p. 537.

(2) Seligman: *Principles of Economics*, p. 513.

(3) Curtler: *Short History of English Agriculture*, p. 293.

(4) In Belgium prices almost exactly doubled in 50 years, 1830-1880, but the severe crisis brought about by the reduction in the price of corn, owing to the opening up of the American corn fields, led to a marked decline in the price of arable land by no less than 33 per cent. between 1880 and 1895. The price of pasture land depreciated somewhat less by 23 per cent. Rowntree: *Land and Labour: Lessons from Belgium*, p. 146.

per cent. so that the pressure on the soil has been considerably lightened. The gross produce has probably been doubled but, so far from this resulting in lowering prices, these have practically doubled also (1). The migration of colonists to the new irrigated areas has not resulted in any decline in the price of land in the older districts. On the other hand, the savings of the colonists have enabled them to offer higher prices for plots in their home villages. It seems clear that in a province of small holders, like the Punjab, no expansion of cultivation that can be contemplated is likely to check the upward rise, unless it be too sudden. The large areas offered for sale in the various colonies in the Punjab, Bahawalpur and Bikaner seem to have exhausted much of the accumulated savings of the people and left only the annual savings for new purchases.

The second cause, mentioned above, is some great and sudden improvement in the art of farming here or elsewhere. One factor affecting this province is the great improvement in railway facilities and communications that bring the Punjab into regular intimate touch with the great markets. The land, prior to the considerable expansion of cultivation just referred to, was sufficient for the production of the people's food supply in normal years. As the cultivated area has been increased, the production of wheat has increased, and there has been a large surplus for export. This export is, of course, due to a demand for wheat in markets outside the province, and its continuance depends upon a continuance of the demand from those markets. It is improbable that any scientific discovery in regard to, say, the part played by soil bacteria or nitrogen fixation, will enable European importing countries to grow all the wheat they require and so lead to a decline in their demand for foreign grown produce. Such an event is not impossible; moreover it is not beyond all possibility that a discovery should be made that would enable a far heavier outturn than at present to be secured from Punjab fields. A sudden increase in outturn, if it caused the supply to exceed the demand (2) for a few years in succession, would tend to throw much wheat land out of cultivation as well as to reduce the price, and as a result land values might decline. It is immaterial where the increased outturn is produced so long as it affects world prices. The import of Australian wheat into Indian ports undoubtedly affects wheat prices in the Punjab and, if it be continued, it may affect land prices also. There was an interesting phase in Bengal where the

(1) See *ante*. The great canal schemes brought great wealth into the province, and it is this new wealth which is the chief cause in the rise in the price of land.

(2) Or even to exceed the capacity of existing transport facilities to remove it. The outturn on most canal lands would be largely increased by the use of better ploughs, harrows, etc.

Then to transport ^{rather} a lot of wheat & cotton
depress land & value.

efforts of the Agricultural Department succeeded in raising the outturn of jute per acre; but there was no demand for the extra jute produced and its price fell. Under Punjab conditions the value of land in Bengal would have fallen. Anything that interrupted the export of wheat outside the province would tend to have the same effect as a decline in demand. A paralysis of the railway to the ports due to political causes, of a prolonged interference with the free export of wheat in the interests of the urban consumer or the flooding of the ports with Australian wheat, would tend to reduce prices in the local markets and so to remove the incentive to grow wheat. The cultivator grows wheat primarily, in order to feed himself and family, to secure the wages of his labour and some profit on his enterprise. As has been mentioned in the discussion of the Human Factor, the farmer seems disinclined to expand his enterprise or improve his methods; and a clear and strong incentive is required to stimulate him to further effort. Remove the incentive of profit and his production will decline and land values fall in sympathy. In a province where half the land is cultivated by tenants it is clear that land values must be largely dependent on rents. As will be shown later, cash rents have not risen so rapidly as the price of land, and as the price of land has risen more rapidly than prices of agricultural produce, it would seem that already land values have soared to a height that is not supported by the rents, whether in cash or kind, on which they are in the long run dependent. Anything that leads to a reduction in rents may react on land prices. To illustrate the argument it may be permissible to call to mind what happened in England last century. Towards the close of the Napoleonic wars wheat rose in price, and, as year followed after year and high prices were maintained, both landlords and tenants jumped to the conclusion that they would be permanent. Rents increased rapidly, and speculation in land became general. Many people outside the old landlord and farmer class put all they possessed or could borrow into agricultural lands. Unlike the practice in the Punjab the boom caused large sums to be sunk in improvements; manure was procured from the most remote quarters; rapid and extensive progress was made; tillage was improved and much bog and waste land reclaimed. But prices began to fall. The Corn Laws were repealed and a period of depression set in. Even after the abolition of the Corn Laws, however, many competent judges held the opinion that the land would continue to rise in value. It was argued that as the area could not increase and the population was steadily increasing land must become dearer. Men failed to foresee the opening of millions of acres of virgin soil in other parts of the world and the coming improvements in transport. When the American wheat flooded the English market

prices collapsed. Rents had to be reduced; the total decrease being estimated at 23 per cent. in fourteen years; the profits of the occupiers fell on the average 40 per cent.; and between 1875 and 1894 the capital value of land decreased over 49 per cent. (1). The recent sharp slump in prices of agricultural produce had a somewhat similar effect in the Punjab. The rise in the price of land received a temporary check, but apparently the price is independent of the rents and it soon recovered.

This brief reminder will serve to show that land is not necessarily bound to go on rising in price; two possible causes that may lead to a decline have been mentioned. Two others suggest themselves as within the bounds of probability. The price of land, as has already been pointed out, depends to some extent on rents or profits of ownership. These may be reduced in two ways. The village labourer may, with the spread of industries or other developments competing for his labour, insist on receiving a higher wage for work in the fields, and owing to this and similar causes, the costs of cultivation may be so increased that the landlord may be forced to remain satisfied with a smaller proportion of the produce as his rent. A similar result will follow if the tenant secures for himself a larger share of the produce as wages of his labour (2). The rapid expansion of the irrigated area in the Punjab and adjoining States has led to a demand for tenants; the first to be attracted to the new colonies are those cultivating small holdings or holdings in the more precarious tracts, and this may result in forcing landlords to compete for tenants by reducing rents.

The other probable cause is an increase of taxation. India has for long enjoyed what is probably the cheapest form of administration of any civilised country. With the change to democratic institutions it is to be anticipated that there will come the great increase in public expenditure that seems almost inevitably to accompany such a change everywhere. The demand, for instance, for universal free compulsory education, can only be satisfied by a very large expenditure of public funds that must be raised by taxation. Some objects of public expenditure as, for instance,

(1) Curtler: *Short History of English Agriculture*, pp. 243—310.

(2) In England about 1348 A. D. the Black Death caused a heavy decrease in the supply of labour; the result was that the cost of cultivation rose and landlords' profits were seriously diminished, the area cultivated by the owner with the aid of paid labour declined and more was let out on lease to tenants.

Thorold Rogers estimated the profits of farming under the old Bailiff system before the Great Plague, as 18 per cent. in a year of average or rather more than average fertility. After the pestilence had subsided the profit sank to a miserable rate, less than 4 per cent. on the capital invested in the estate. "Property had become, at first sight, utterly valueless. There was a great depression in the value of the most important article of farm produce, wool, and a prodigious exaltation of all products of manual labour." (Vol. I, Ch. XXVIII).

improved roads, medical attendance or veterinary aid against cattle disease, yield advantages within a comparatively small period of time; but expenditure on education requires a long interval before anything approaching a financial return can be shown. During this interval if the owners or tenants or both are called upon to pay taxes assessed on the land, the advantages of ownership will be diminished (1). The present tendency of the Government of India to raise revenue by heavy levies on trade may reduce commerce in agricultural produce and affect land prices.

This, however, concerns the future rather than the present. The most recent reports are of special interest. In the Lower Bari Doab Colony there was an increase in the price realised at Government auctions from Rs. 229 per acre in 1917 to Rs. 331 in 1918. This was probably due to the discovery that the land was suitable for American cotton (2).

In the following year these high prices were exceeded, an area of nearly 8,868 acres being sold at an average price of Rs. 493 per acre. The highest price realised was Rs. 1,018 per acre for a lot of 25 acres in a village one mile from Khanewal Railway Station. That these high prices are largely due to the plethora of money seeking investment is illustrated by the fact that the sale for sites for new town shops in Montgomery yielded a price of Rs. 5,82,212 per acre (3). In more settled districts, where little land comes on the market in the course of the year, very high prices are obtained. Land irrigated by wells in such congested districts as Hoshiarpur and Jullundur brought an average price in 1926 of Rs. 3,456 and Rs. 2,860 per acre, respectively. Other districts yielded—Ambala Rs. 1,641, Ludhiana Rs. 1,736, and Lahore Rs. 1,135. High prices were obtained in districts where good land is scarce and hard to come by; in Attock the average was Rs. 1,541 and in Jhelum Rs. 1,152. Canal irrigated land is usually cheaper: Shahpur Rs. 1,329 per acre, Lyallpur Rs. 918, Amritsar Rs. 1,390. The value of land dependent on rainfall varies from Rs. 53 per acre in a precarious district like Hissar to Rs. 814 and Rs. 968 in congested districts with good rainfall

(1) Compulsory education will also tend to withdraw from field labour the children of the cultivators, and the work they now do will either have to be left undone or to be done by paid labour, thus adding to the costs of cultivation.

(2) The introduction of a highly profitable crop *may* send land values up, as the introduction of hops into England did to an almost incredible extent. Cf. Curtler, p. 149. Any new economy in production or improvement in the art of agriculture would tend to enhance rents, and therefore the price of land.

(3) The official report states "as with agricultural land, so with these town sites, the extraordinary high prices are due in some measure to the existence in the country of large amounts of money for which there is no available investment carrying public confidence." The situation is one singularly favourable for industrial development if this confidence could be enlisted by the pioneers of industry.

like Hoshiarpur and Ludhiana (1). In the ten years, 1921-22 to 1930-31, over 608,000 sales took place involving the transfer of 1,325,000 acres of cultivated land for over 52 crores of rupees.

The continued rise in price appears to be the result of the local conditions in each village. The owners are hereditary cultivators born and brought up in the same village, which they have no intention of leaving unless they can secure land in a colony. In this village there is practically no open market for land; a newcomer could not rely upon being able to buy if he chose to leave his own home and migrate to this one. There is hardly any such thing as "land for sale." Progressive sub-division of holdings, consequent on the custom of inheritance whereby each son has a right to succeed to a share, has led to the land being cut up into small parcels that, in the vast majority of cases, are less than the owner could cultivate with his existing resources. These holdings can only be increased by snapping up any plots that happen to be for sale. So that the majority of owners are prospective purchasers of any field that may be offered. The small holdings, and the fact that each is scattered over the village area in ten or a dozen places, facilitates sale. A farm in England that consists of 150 acres could only be sold as a farm; it would not be cut up into parcels and sold in fragments. The provision of buildings, etc., would not permit of the farm being broken up into separate plots. Thus prospective purchasers are reduced to those who can afford to buy the whole, and these are apt to be fewer in number than those who could raise money to buy a field. Here, the small fields, and the fact that already fields cultivated by the same person are not contiguous, render sale easy. The average area sold in one transaction is very small, and accordingly the price is not beyond the means or the credit of many in the village, nearly all of whom, as has been remarked, are anxious to add to their own possessions. The average area sold per transaction was, in the quinquennium ending 1901, 5.9 acres total, & 3.3 acres cultivated.

"	"	1906,	5.7	"	"	3.4	"	"
"	"	1911,	5	"	"	2.8	"	"
"	"	1916,	4.5	"	"	2.68	"	"
"	"	1921,	4.07	"	"	2.4	"	"
"	"	1926,	3.7	"	"	2.2	"	"
"	"	1931,	3.3	"	"	2.1	"	"
single year		1931-32,	2.9	"	"	1.8	"	"
"	"	1932-33,	2.6	"	"	1.9	"	"
"	"	1933-34,	2.5	"	"	1.5	"	"

Thus the plots are not only small but are steadily becoming smaller. A parallel may be found in Belgium, the greater part of which is covered with small holdings. "Whenever a little plot of land becomes available, the possible buyers or tenants are on the spot;

whereas in England, even if a large farm were divided up, there would seldom be a sufficiently large number of people anxious to buy or rent in the immediate neighbourhood to cause so active a demand as in Belgium. Thus it may be said that the tendency of sub-division to raise the price of land is cumulative. In both countries the demand for small farms is greater than the demand for large ones, as comparatively few persons are possessed of sufficient capital either to rent or buy the latter; and so there is but little competition to acquire them when they come into the market. But this is not the case with small ones (1)."

Much the same considerations apply to the Punjab. The fact that the average holding is smaller than could be cultivated by its owner without further help, serves to create a constant demand for land to be added. The small size of the fields brings the price within the reach of most of the neighbours; while the mere fact that a field purchased is not contiguous to others owned by the purchaser is not considered a drawback. Where, however, the land for sale is a comparatively large plot of, say, ten acres or more, the small holder is unable to bid and only the larger landlord can afford to buy.

To these influences there is to be added one of great importance. The opportunities for adding to the holding are very rare indeed although latterly they have been increasing. In the first edition of this book it was shown that the number of recorded transactions for the previous 21 years was about 46,000 a year; in the next ten years the average has been 60,890. Still this is only one per 40 families so that the chances of being able to add to the holding occur very rarely. This fact undoubtedly is responsible for the large prices now paid. Competition is very keen and is hardly affected by prices of produce, wages of labour, land revenue demand, etc. The rapid recovery of the price of land after the first effects of the depression suggests that the demand is for land rather than for any profits that may accrue from ownership. Land is endowed with a scarcity value; and it is this scarcity value that accounts for the high prices paid in such remote tracts as Kulu. In this Himalayan canton the average price for the period 1871-91 was Rs. 27 per acre; for the period 1891-1912 it was Rs. 85 per acre. The writer of the *Gazetteer* remarks that the price of the land bears no relation to the profit to be made out of it. Across the Central Himalayan Chain the price is Rs. 157 in Lahul and Rs. 133 in Spiti. These high prices are almost entirely due to the intense scarcity of land suitable for cultivation, while the scattered nature of the habitations adds a high site value to the land. These figures are interesting as the areas to which they relate are not affected by

(1) Cf. Rowntree: *Land and Labour: Lesson from Belgium*, p. 151.

the factors usually mentioned as the causes of the high prices of land. The population is not increasing with any rapidity ; there are no new markets ; no railways ; no industries ; no urban population ; the roads are as they have been for ages, with one exception ; there is no export trade in agricultural produce that could account for the rise. Peace and security under British rule, a low revenue demand, profits from trade with Tibet and Central Asia facilitated by special measures, are responsible for the rise. Land there, as elsewhere, is no longer a burden and an excuse for an exorbitant State demand, but is a means of livelihood that can be enjoyed in security. The people make a little money by trading and labour and have no other possible investment for it than land or stock. It is, in these lonely spots, no good to a man with money in one village to know that land is for sale two villages off.

It is becoming increasingly clear that the factors referred to have raised the price well above the economic limit (1). A recent Report on the Court of Wards in the Punjab deals with a cultivated area of over 200,000 acres ; the estimated value is only Rs. 94 per acre. The gross income accruing from this large area works out at under 7 per cent. of the value ; after paying land revenue, the rate is reduced to 5 per cent. and, when the cost of management and ordinary repairs is deducted, the resulting profit is $4\frac{1}{2}$ per cent. If the land was valued at 157 times the land revenue (the multiple for 1916-17) the net profit would be 3 per cent. The Report published in 1920 gives a similar result. It is difficult to form an accurate estimate of the profits of farming anywhere at any time but the Punjab Banking Enquiry Committee, in a note on Land as an Investment, brought together evidence which indicates the net return on a purchase at about 2 to 5 per cent. The figures quoted illustrate the point that the present price is higher than would be justifiable in the case of a man buying land solely for the value of the yield he was expecting to extract from it. The general prosperity of the province already referred to, coupled with a large income from service in the army, etc., and an appreciable sum from the earnings of emigrants to Australia, America and other places (2), have brought into the

(1) Cf. Rowntree : *Land and Labour : Lessons from Belgium*. Other than merely commercial reasons influence buyers of land in Belgium for gilt-edged securities are considerably more profitable (p. 148). So great is the competition for small plots that prices much in excess of their real worth are frequently paid. This means that the yield from the land is not sufficient to give reasonable interest upon the price paid (pp. 152-3). In the Punjab it is difficult to discover what is the actual price paid owing to the insertion of exaggerated figures to defeat the pre-emption law.

(2) The net result of foreign money orders first gave the Punjab a surplus about 1895-96. The excess of sums received over sums despatched was Rs. 25 lakhs in 1900-01, Rs. 43 lakhs in 1910-11, over 58 lakhs in 1917-18, over 43 lakhs in 1931-2, and the import of savings steadily goes on.

Belgium
Belgium
2 to 5
5 to 10
higher
only
higher
Census
Note

*The case of land the rise in its price
is prime factor in its continued rise -
good investments 231*

possession of the people large sums of money for which they can think of no investment except the land or jewels. In former times the latter was a popular form of keeping surplus money, but there is always a loss on realisation. In the case of land, the rise in price is a prime factor in the continued rise of price; that is, the common experience is that an investment in land will yield a profit on realisation. If the land is not, at the time of purchase, quite worth the price demanded, it will probably become so in a few years. There is thus a tendency to forestall the increase in price. American experience corroborates this: the Business Men's Commission reported that the prevailing optimism regarding land values had had much to do with their actual rise. The prices at which land had been sold were not justified by yields, but as long as values were rising, investments in land were generally profitable. For long periods, so the Report runs, the rise in land values appears to have been sustained largely by its own momentum. Another factor is the wealth accruing to professional men for which they are unable to find a safe and suitable investment. Industries are unimportant and joint stock enterprise is moribund. In 1868 there were 40 pleaders in an area which now finds work for thousands and these and other professional men evince a natural desire to become owners of property which will not decline in value. In these cases the direct return is of minor importance. In recent years, however, a profitable field for investment has rapidly developed in the demand for shops, factories, godowns and houses in the rising market towns of the colonies and for bungalows for Indian gentlemen desirous of securing more healthy surroundings in the cities. The return for these is probably somewhat higher than from land and the non-agriculturist capitalists have shown less eagerness to bid at colony auctions.

It will be seen from what has been said above that the continued rise in prices, so far from being a subject of congratulation, is really a matter for serious concern (1). Speculation in land has seldom proved of much help to agriculture, whereas it has frequently, as in Ireland and the United States caused considerable harm (2). As has been pointed out, a great

(1) It is of course a matter for congratulation as conclusive evidence of the abounding wealth of the province and lightness of the revenue.

(2) A Danish Minister is quoted in *Better Business*, Vol. IV, No. 20, p. 109, as saying that the value of land has become an object of speculation in Denmark instead of a common source of national labour and self-support. This state of things is detrimental to the best interest of the nation and hindrance of its welfare. In the U. S. A. a rising value of land tempts owner-farmers to sell at intervals in order to realise the profit on their investment. This of course militates against investing money in expensive improvements. In a favourable period a farmer may make more money out of the increase in value of his farm than out of its cultivation.

*This money neither adds to the area
under cultivation nor increases
the produce but ²³² improvement.*

factor in causing the rise is the rise itself. If land were to decline in value, it would rapidly fall out of favour as a source of investment, and the capital thus set free would be available for development in other directions. It is an obvious evil that the new capital is invested in the land, and not in improvements to the land. Of the several companies owning railways in the province, none has attracted much of its capital from within it, yet the official report shows that nearly 2½ crores of rupees were spent on buying land in 1917-18 while in the ten years 1921-22 to 1930-31 over 52 crores was recorded as the price paid for land sold (1). This money neither adds to the area under cultivation nor increases the produce from the present area. It is remarkable that the rapid rise in price, the demand for purchase and the wealth seeking investment have not resulted in any marked movement towards reclaiming waste areas, draining swamps, recovering land damaged by torrents, etc. A very large area of the province is at present not culturable, but a goodly portion of this could be made so by the judicious expenditure of capital. The almost complete dearth of enterprise in this respect deserves more notice than it at present receives.

Another serious drawback in the existing situation is that inflated land values render it practically impossible for the small owner or a tenant with a little capital to obtain land. There is no means of arriving at the number of owners who have been expropriated in recent years. But of the 50 to 60 thousand sale transactions that have been completed every year for the last 20 years a certain proportion must represent reductions of holdings below the limit of economic livelihood, and a further proportion must represent the fall of ancient owners to the position of tenants. It is no answer to say that there have been corresponding additions to other holdings. It is of little moment whether the well-to-do adds a few acres to an estate already large enough for his support in comfort. It is of considerable importance that tenants and owners of uneconomic holdings should be able to look forward to acquiring lands or at least secure a hereditary right in land as a reward of thrift. Nearly half the land of the province is cultivated by tenants-at-will, many are themselves owners in the same or a neighbouring village; but a considerable number are not owners, and it would strengthen the economic position in the province if they could become so. In other countries it is practicable to buy land on borrowed money and to repay this in instalments; in the Punjab colonies this hope has led to innumerable cases of good cultivators

(1) This figure is probably an exaggeration resulting from the custom of entering larger sums in sale-deeds than are actually paid in order to defeat would-be pre-emptors.

being tempted into disastrous ventures. Optimism, born of tales of high profits earned by grantees, has led auction-bidders to overstep the limits of caution and great disappointment and much suffering has resulted. The fact that the price of agricultural land exceeds its economic value has been driven home to many whose only fault was a sturdy determination to try to win a position as owner by hard application. If the prices had represented merely the economic value these industrious and enterprising cultivators would have won their way to success instead of being evicted as defaulters.

The rise in the sale price has been accompanied by a corresponding rise in the average sum obtainable on a mortgage, but here again the enhanced credit has been productive of evil rather than of good. It has not yet been used to raise funds for productive purposes, and the volume of unproductive debt tends to rise steadily with the increase in credit. To one who desires to sell his land the present high prices may be welcome, but to the cultivator intending to spend his life on his holding these merely bring temptation to borrow. It has been said that countries under a poor system of agriculture with inefficient labour cannot maintain a high value of land, and it is not improbable that the existing uneconomic rates in the Punjab will give way as other avenues for the investment of money are opened up under conditions calculated to inspire confidence. One effect of the war was to raise the interest receivable from Government securities until it differs little from the return from land leased on a cash rent. Any such tendency would probably bring benefit to the province, as it seems clear that its rapidly increasing wealth is, for want of opportunities for productive employment other than land investment, giving rise to a distinctly unsatisfactory situation.⁽¹⁾

Whether a cycle of industrial development would serve to diminish land values or retard the rise is by no means certain. The greater portion of the population is Muslim, and a very large number of these will not buy any securities bearing interest or even profits. They hesitate to acquire shares in railways or mills. Many even avoid trade. For them the rate of profit accruing from the acquisition of land is of little importance

(1) The following extract from the Land Revenue Administration Report for 1919-20 is interesting in connection with the above discussion:—"How far the increase of mortgage debt is a direct result of the increase in the value of land and how far it is a result of an increase in the expenditure of the agricultural population, whether on necessities or luxuries, are questions to which it is very difficult to give very definite answers under the changing economic and social conditions of the present time. All the factors are inter-related and operate on each other mutually. It may, however, be said with some confidence that the enhanced value of agricultural lands has enlarged the credit of the landowner and cultivator and made it easier for them to raise funds to meet an expenditure enhanced by the higher prices of necessities as well as of luxuries."

beside the fact that land purchase is permitted to them and affords a secure investment. There is thus an additional force driving Muslims into the purchase of land. The possession of large areas already does not deter them from desiring more. Agriculture is an industry that appeals to Muslims as being free from any religious impediments. What is the extent of the influence of this feeling on prices is not open to estimation.

CHAPTER XII

EFFECTS OF THE RISE IN THE PRICE OF LAND

Cases of repeated re-sale—reasons given by the people—effect on improvement—on rents—on tenancy—on cropping—on fodder acreage—comparison with costs of production—no benefit to agriculture.

It is a moderately easy task to work out the tendency of economic forces under circumstances which permit of these forces producing their full effect. But it is more difficult to discover what in actual life these effects are when the tendencies are influenced by custom, prejudice or ignorance. The Punjab is very far indeed from being organized on economic lines, but there is a distinct, if slow, movement towards that state. In order to throw some light on the economic effects of the rise in the price of land a list of eleven questions was sent to those Inspectors of Co-operative Societies who were graduates (nearly all in economics). They were instructed to try to find out actual facts, and to keep these separate from their own opinions. Their opinions were to be given on each point after the facts they had ascertained had been related. They were to make enquiries in the ordinary course of their inspections.

The questions and a general summary of the answers received constitute this chapter.

The first question called for such information as might be readily available relating to the rise in the price paid for land. It was not easy to unearth many cases of re-sale of the same plot after a period of years, so that it is difficult to say more than that land has risen in price throughout the province. The rise, however, is uneven. It is greater near the larger towns and in the case of land bearing two crops a year and in the case of irrigated land. The Inspectors generally ascribe the rise to the high price of produce, the great prosperity of the cultivators resulting in their becoming possessed of large sums of money and the absence of any alternative for investment. In the Lyallpur Colony squares of land (about 27 acres) sold for Rs. 4,000 each in 1914, Rs. 6,000 in 1915, Rs. 8,000 in 1917, Rs. 10,000 in 1918, Rs. 16,000 in 1919, and Rs. 22,000 in 1920. These are not averages but actual instances and illustrate the extent to which money is available and the determination of those possessing it to obtain

land at any cost. Some actual instances of resale of the same plots collected in Gurdaspur are as follows :

Area.	Price on first sale.	Price on second sale.	Period between sales.
	Rs.	Rs.	
2½ acres ..	1,000	1,400	12 years.
3 „ ..	240	350	5 „
7 „ ..	900	1,340	5 „
3½ „ ..	1,000	1,575	5 „
2 „ ..	100	250	6 „

One Inspector illustrates the view of land in Sikh times as a burden by the tale current in his own village of a man who was sentenced by a *punchayat* to be given 50 acres of land to cultivate and to pay the revenue on it as a punishment for singing in the streets so loud that the women in *pardah* could hear him.

It is worthy of note that in no case was there any suggestion put forward that the price had gone too high or that the yield did not give a good return on the investment. It has taken the depression to convince many that there was a severe limit to the rise.

The second question concerned the reasons given by the people for this rise.

According to the replies received, the people themselves ascribe the rise in the price of land to one or more of the following causes :—

- (a) Rise in the price of produce ;
- (b) increase of wealth ;
- (c) improvement in communications ;
- (d) development of canal irrigation, and the prospects of further development ;
- (e) increase of population ;
- (f) the cultivators are stimulated by the high prices to work at their calling with greater exertion than formerly and so secure higher yields ;
- (g) the people are more ready to spend money than in former times, they seek to invest it in land instead of hoarding it, or spending it on jewels ;
- (h) as the Land Alienation Act restricts the opportunities open to money-lenders to acquire land, they pay a higher price for such land as is available for purchase by them ;
- (i) the remittance of money from Punjabis in Australia, America and other foreign countries ; this is invested in land almost regardless of the price ;

- (j) the land has been improved and rendered more fertile ;
- (k) the continued sub-division of land amongst members of the family, as a result of the custom of inheritance, has increased the demand and so the price ;
- (l) the decline in the value of money, and especially the paper rupee.

The general view is that the rise is due to the increasing price obtainable for produce, the widespread increase of wealth and the fact that land is the only investment recognised by the cultivators. It will be admitted that on the whole the reasons given are sound, though those numbered (f) and (j) are rather surprising. Nowhere was the rise definitely ascribed to any particular crop, but there is little doubt that the introduction of American cotton and the high prices obtained for it were causes at work in the colonies, although the comparatively small area under this crop must limit its effects to something less than has been claimed.

No mention was made of the influence of the objections of Musalmans against taking interest. It is possible to criticise a purchase on the ground that the income will not be equal to a fair interest on the price ; but where interest cannot be taken, any return is better than nothing.

The third question was—Has this rise in price had any effect (encouragement or discouragement) on land improvement ?

In areas irrigated by canals or wells it would appear that the high price of land has not had much effect in encouraging improvements, the general idea being that so much depends on the supply of water. There is, however, a tendency to use more manure. The high price of produce, rather than the high price of land, is stimulating the cultivators to improve the yield. In areas dependent on rainfall the opinion is practically unanimous that considerable efforts are being made to improve the land ; fields are being levelled, the use of manure is becoming somewhat more general, waste land is being put under the plough and new wells are being sunk. In eleven villages in Gurdaspur in which enquiry was made, it was found that the number of wells had risen from 23 to 40 in five years and this in spite of the fact that the cost of a well has increased considerably within this period.

It seems clear that the cultivators are becoming more interested in land improvement, and, where a man has paid a high price for a plot, he tries to secure profit from his investment. They are also beginning to take a more commercial view of their industry. It would seem, however, that this is largely due to the high price of produce and only in a minor degree to the rising price of land. The efforts of the Co-operative organization are also resulting in an increasing demand for better seed and improved implements. The enquiries were naturally made chiefly from

co-operators, and concerning these, it can, apparently, be stated with some confidence that greater attention is being paid to problems of land improvement and of extracting a bigger yield, but that lack of knowledge of what would prove profitable is an obstacle to progress.

The fourth question was as to whether the rise in the price of land had any effect on rents. Rents have undoubtedly been rising rapidly in value. Where the rent is paid in kind as a proportion of the crop (*batai*) the proportion has not varied; where the rent is paid in cash the rate has increased rapidly in the last five years.

In Gurdaspur cash rents for *barani* lands have risen from Rs. 2 to Rs. 8 per acre; for *barani* and *chahi* lands, the rent has risen from Rs. 8 to Rs. 16 per acre.

In Toba Tek Singh Circle, the rent for a square is reported to have risen from Rs. 200 in 1914 to Rs. 800 in 1920. In some cases as much as Rs. 1,200 per square is being paid. In Sangla Circle, the rise is reported to be from Rs. 300 to Rs. 800. In Lahore it is reported that rents in cash have risen four or five-fold in recent years. In Jullundur cash rents are said to have doubled in ten years.

This marked rise in cash rents, however, is partly due to the direct influence of high prices of produce and partly to the indirect influence in stimulating competition among tenants desiring to cultivate more land. Where there is any difficulty in finding tenants, cash rents do not seem to have risen. There does not seem to be any evidence that the rise in rents is due to the rise in the price of the land, apart from the rise in the price of the crops.

It is not clear that cash rents have risen as fast as the price of land. On the other hand the evidence from recent Settlement reports tends to show that rents are lagging behind⁽¹⁾. For instance, concerning Amritsar, the following information is extracted concerning the changes that have taken place in the period of 20 years between the last two settlements:—

Tahsil.	RISE PER CENT. IN	
	Price of land.	Cash rents.
Tarn Taran	.. 114 per cent.	66 per cent.
Amritsar	.. 73 do.	39 do.
Ajnala	.. 7 do.	25 do.

Within this period the population first rose steadily and then declined, owing to plague. From 1881 to 1891 it increased 11 per cent., from 1891 to 1901 it increased a further 3 per cent., from

(1) The information that follows was not obtained from the enquiry; it conforms to what is known to be the general rule elsewhere.

1901 to 1911 it declined 14 per cent. The cultivated area contracted slightly, owing to the spread of saline efflorescence by 2 per cent. in Tarn Taran and 1 per cent. in Amritsar. The Lahore Settlement Reports give the following:—

<i>Tahsil.</i>	RISE PER CENT IN	
	<i>Price of land.</i>	<i>Cash rents.</i>
Lahore ..	Nearly doubled	131 per cent.
Chunian ..	Do. trebled	53 do.
Kasur ..	More than trebled	34 do.

In the Government review of the Jullundur Settlement Report it is stated that during the period between settlements prices of produce rose 50 per cent., the selling value of land rose 400 per cent. and cash rents 200 per cent.

In the Gujranwala Tehsil, information is forthcoming regarding each assessment circle for the changes that have taken place in the period 1892 to 1911.

Circle.	Price of land.	Rise in cash rents.	Rise in Chakota rent.
Charkari	From Rs. 17 to Rs. 58	53 per cent. on <i>chahi</i> . 72 do. on <i>barani</i> .	32 per cent. on <i>chahi</i> . 66 do. on <i>barani</i> .
Bangar ..	From Rs. 13 to Rs. 29	31 per cent. on <i>chahi</i> . 74 do. on <i>barani</i> .	22 per cent. on <i>chahi</i> . 142 do. on <i>barani</i> .
Bar ..	From Rs. 11 to Rs. 28	6 per cent. on <i>chahi</i> . 79 do. on <i>barani</i> .	100 per cent. on <i>chahi</i> . 60 do. on <i>barani</i> .

(The above figures indicate a considerable decrease in the return by way of rent on the value of the land).

Other examples could be given but these will be sufficient to show that cash rents have not kept pace with the rise in price of cultivated land. The result is that landlords are pressing for the extension of rent in kind (*batai*) while tenants show an increasing preference for cash rents. Owing to the weakness of the tenants, cash rents are become less frequent.

The fifth question was—Has the rise in the price of land had any effect on tenancy (apart from rents)? Has it led to increase of tenancy? With one exception all the replies agree that tenancy is increasing, the chief change being that village *kamins* are now cultivating land as tenants. This increase is due chiefly to the high price of produce which is making agriculture more profitable. The result is some competition for land and this enables landowners to exact better terms (*e. g.*, in labour or service) from tenants. In the Lyallpur Colony, however, it is said that owners are being tempted by the high profits to resume the land

formerly given to tenants and to cultivate themselves. The only effect of the high price of land is to prevent tenants from becoming owners. [In the discussion on tenancy it will be seen that while sales and mortgages tend to increase tenancy, the high price of land prevents this tendency from being counteracted by purchases of holdings by tenants.] The great rise in the profits from cultivation has led to a demand for more land by tenants and a willingness of owners to let on rent.

The influence on tenancy clearly calls for further and more detailed inquiry. The American Business Men's Commission agree with the view taken in this book that there is little to be said in favour of tenancy except where the tenant may hope to become the owner of his holding. Rising land values, they say, are not a national asset when the increases in value do not represent improvements put into the land, and their effect in preventing tenants from rising to ownership is definitely harmful. The worst result of rising prices of land is the unearned gain accruing to landlords who have not worked for their new wealth.

The sixth question was—Has the rise in the price of land had any effect on cropping? The replies agree that more attention is being paid to the selection of crops that will prove most profitable and also that methods of cultivation are being improved, but this is ascribed to the high price of produce rather than to the high price of land. It seems to be clear that the high price of land has not yet had any effect towards replacing annuals by perennials such as fruit, etc.

The seventh question was—Whether the rise in the price of land has discouraged the sowing of fodder crops? Fodder crops tend to decline in area to the absolute minimum required to feed the cattle; but owing to the high price of fodder and the high price of cattle, great care is taken to see that there is sufficient fodder sown. There is no sufficient reason to believe that the high price of land has any influence on the area.

There seems to be a tendency for tenants to grow more fodder than do owners; specially where under the system of rent-in-kind the owner takes a smaller share of such crops.

The eighth question was—Have sales during the last ten years been made to old residents in the villages or to outsiders?

In the great majority of cases sales have been made to old residents of the village. This is almost universally the case with small plots. Outsiders may purchase if a large plot is being sold.

The remaining three questions were:—

- (1) Can you compare the rise in the price of land with the rise in the cost of production?
- (2) or with prices obtained for the produce?
- (3) or with wages paid to village labourers?

The general result of the enquiry is that the rise in the price of land is greater than the rise in the cost of cultivation and the rise in the price of produce and that of labourers' wages. But the details vary very considerably. In Jullundur while the price of land has trebled, the cost of bullocks, male buffaloes and bullock-carts has rather more than trebled, the price of produce has about doubled, and the wages of labour have increased six-fold.

In Ludhiana the cost of bullocks, buckets (*charsa*), manure, plough shares and bullock carts has increased about three-fold in 20 years; the price of produce has increased $2\frac{1}{2}$ times, and of labour four-fold. But land has increased six to eight-fold.

Hissar reports somewhat similar figures.

A very careful report from Gurdaspur agrees with the above, but puts the rise in the price of land much lower. It has not doubled in the periods taken.

From Rawalpindi comes a similar reply; the price of land has doubled, while costs of cultivation have much more than doubled and the price of produce in the hill tract has increased nearly four-fold (chiefly potatoes).

Taking however the reports as a whole the various increases come in the following order:—

- (1) Price of land.
- (2) Wages of labour.
- (3) Price of produce.
- (4) Cost of cultivation.

If this is correct it means that the small owner, cultivating by himself, or a tenant, is gaining a higher income than before and so also is the labourer. The large owner cultivating through tenants paying *batai* is also more prosperous. On the whole, in spite of the increasing cost of labour and of other expenses of cultivation, agriculture seems to be more profitable than before.

In conclusion, it would appear that the dominating factor at present is not the high price of land but the high price obtainable for its produce. The latter is acting as a stimulus to greater exertion and greater interest. The outstanding fact is that the high price of land brings no benefit to agriculture, while on the other hand the increase in the expenses of cultivation and the greater wages of labour have not yet served to prevent the price of land from mounting still higher. These last two conclusions are of very great importance.

It should be noted that a high price for land is apt to put in the way of improvident owners a great temptation to sell while it enables the more careful to redeem a larger portion of their holdings by sale of a smaller one. Both these tendencies are at work in this province; but the object of the inquiry was to ascertain the effects, if any, of the rise in price on the system of agriculture.

CHAPTER XIII

THE ABUSE OF RURAL CREDIT AND THE LAND
ALIENATION ACT

Land not a basis of credit in pre-British days—little wealth for money-lending—Law and Order make credit possible—Rights in land recorded and revenue demand reduced—old restrictions on the transfer of hereditary land—the money-lender seeks not the land but its produce—the appearance of mortgages—the peasant unused to credit—the increase in money-lenders and money lending—now checked—causes of indebtedness—land revenue and cattle—debt due to too facile credit—here and elsewhere—increase in sales of land.—All-India inquiry and its result—the Punjab Alienation of Land Act—its results—area sold and mortgaged since 1901—criticisms—numbers protected and unprotected—no right to buy—the agriculturist moneylender not swallowing the small owner—Mr. Darling's criticisms and suggestions—answered.

A glance at the history of the Punjab for three or four centuries preceding 1848 discloses an almost unending series of invasions, wars, rebellions and famines. Sometimes the invader attempted to establish something approaching settled government, sometimes he was the leader of a mere plundering expedition; whatever his intentions the result was several centuries of unsettled conditions during which economic progress was practically impossible. Under circumstances such as these, industries could not flourish, capital could not be invested in a form that might attract the cupidity of the invader, the possession of moveable wealth could not be disclosed. Those around the court might make a display that would attract the attention of the traveller but the mass of the people were concerned in hiding from prying eyes such surplus wealth as they might have secured. The governments, such as they were, were despotic and whimsical. Rights of the people against the State were not recognised. Private property in land, such as is now known, was non-existent. Even in Sikh times, when some sort of settled administration was devised by Maharaja Ranjit Singh, the great Kardars would evict from the land those who offered too little revenue in favour of those who offered more. A new favourite would receive a grant of land irrespective of whether it was already occupied or not. If it were under cultivation by others, the grantee had the choice of leaving these as tenants

paying rent to him, or of evicting them in favour of his own retainers. Whether there was such a thing recognised as proprietary right which could be enforced against the governing power is not, for the present discussion, of any great importance. Professor Kale writes that "Lands really belonged to those who or whose ancestors had cleared and reclaimed them. But in the vicissitudes of fortune, in times of foreign invasion and civil wars, these proprietors were dispossessed and were reduced to the position of tenants. These conquerors were themselves later on made to give up their ownership when another wave of invaders or immigrants came, and they became tenants of a superior kind. Old princes and chiefs who were thus brought under subjection, were often, as a matter of policy, continued in possession of their lands on condition that they collected and paid into the public treasury the tax levied upon their tenants, deducting and reserving a certain share thereof for themselves. Farmers of revenue and revenue officers of government often made the lands, whose revenue they collected, their private property. Leaders of turbulent and restless tribes took advantage of the confusion of the times and also became proprietors.(1)" Similarly the Famine Commission of 1880 reported that agriculturists generally, before British rule, existed in a state of serf-like tutelage and dependence on higher authorities. The cultivator had no rights to trade with, and little concern beyond raising and harvesting his crops. All beyond this was managed for him by the State farmer or revenue officer, or by the village headman, and the village banker who made him advances also conducted his business in subservience to the local authorities. From this and similar conclusions arrived at by other writers, it is apparent that there was no such thing as clear undisputed title of any value; and it would appear to be beyond doubt that land in general (without reference to special localities) could not be a foundation for credit. It is not difficult to find instances where the possession of land was an encumbrance rather than a privilege; where the revenue demand was so great that the fields were deserted, and the cultivators went to other parts of the province. They did not sell their land to the shopkeeper or other capitalist, but just left it and went way. The persons who were responsible for the revenue did not regard themselves as owning a valuable and transferable commodity, but as possessing a right to cultivate on condition of meeting the State demand. Whatever may have been the conditions prior to the successive invasions from

(1) *Indian Economics* (3rd edition), p. 456. Clearly, in the conditions described, it is difficult and dangerous to talk of rights in land, or of land belonging to anybody but the state.

the West, there is no doubt that for centuries land could not have been a basis of credit in the Punjab. The same unsettled conditions militated strongly against the accumulation of wealth; for thrift and saving there must be peace and security. The postponement of a pleasure or satisfaction is not likely to be popular or general if the subsequent enjoyment be uncertain. At all times unprogressive agriculture leaves little scope for the accumulation of capital and as there is seldom a surplus from which savings can be effected, there is little chance of repaying a loan if one were obtainable.

Thus there would be little capital with the predecessor of the present usurers, and little chance of recovering any advance made. Credit, as now known, could hardly have existed. That there was widespread usury, as well as credit, is clear from ancient Hindu law relating to its control, but it could never have been that facile operation which is now known under the name. Widespread debt was impossible because (a) there was little accumulation of capital to lend; (b) there was little surplus from which a loan could be repaid; (c) there was practically no security to offer; and (d) there was no sure means of enforcing recovery against a recalcitrant borrower. The early administration reports of the Punjab regard the trade with Tibet and Central Asia as the only trade worth mentioning. It has never exceeded more than a few lakhs worth. Exports through the eastern and southern borders were negligible. Latterly produce available for export has exceeded fifty crores a year, indicating a large income from which loans could be repaid. As regards the enforcement of recovery there were few civil courts of any influence or efficiency even in Sikh times. The persistence until recent times of the ancient Hindu practice of sitting *dharna* suggests the lack of a more judicial method of obtaining redress.

With the advent of the British came the introduction and maintenance of law and order, the levy of an equitable system of taxation in accordance with easily ascertainable principles, the recognition of private rights in property even against the State, the systematic recording of those rights, with cheap facilities for transfer within the custom of the locality or race, and above all the sustained endeavour to encourage all efforts to improve the economic position of the people. All the essentials of sound credit that it was possible for a Government to confer were soon present. Unfortunately the change in the administration was not accompanied by the development of the economic sense amongst the people. A succession of fleeting empires and short-lived principalities had served to inculcate habits and customs the reverse of those required for material progress;

and the experience of the last eighty years has been insufficient to lead to as radical a change as the new circumstances made desirable. The rise of the Sikh power under the great Maharaja Ranjit Singh was a military event; it was not accompanied by any considerable effort to improve economic conditions. The civil administration of the time has been described by Sir Lepel Griffin as "the simple process of extracting out of the unhappy peasant every rupee that he could be made to disgorge; the limit of oppression being only marked by the fear of his revolt or the abandonment of his land through discouragement and despair. The Sikh farmer of revenue did not wish to kill the goose that laid the golden eggs, but he plucked its feathers as closely as he dared." (1) The State frequently took as much as one-half of the gross produce besides a multitude of cesses, and any accumulation of arrears was apt to be met by the despatch of a regiment to collect it. In the Punjab land was, and still in theory is, held by village communities paying jointly the demand of the State. There was ample land but there were not always enough cultivators to join in meeting the common burden. The State, or the revenue farmer beneath it, took all there was to be taken and the cultivator was left with no surplus. Thus there was no room for an idle landlord between the cultivator and the State; such a landlord would not have been able to exact more than the State already did and so would have been unable to secure any owner's profits. In these circumstances land had little value; transfers were practically unknown. There was nothing to be gained from taking it in payment of debt. It yielded more responsibilities than profits and offered no security for credit.

Between the death of Ranjit Singh in 1839 and the annexation of the province ten years later, the civil administration practically disappeared amidst the internal dissensions and rebellions that ended with the second Sikh war. A period of great administrative activity then ensued but progress was interrupted by the disturbances of 1857-58, and in the next decade the province passed through a cycle of bad seasons commencing with the famine of 1869. The officers for the new province were largely drawn from Agra and Oudh and brought with them ideas of a revenue demand which were soon found to be ill adapted to a tract with a rainfall far more precarious

(1) He has been succeeded by the newly-inspired Government of India which since the Reforms of 1920 has embarked upon a similar policy of extracting from the general consumer as much as he will pay through customs duties. In some cases the duty is defeating its own end and the Finance Member admits the tariff is too high. The complete reversal of policy towards taxing the poor that dates from the Reforms of 1920 has attracted far too little attention.

than that of the country from which they originated. The summary settlements almost everywhere reduced the demand of the Sikhs, but it would seem that cash payment and rigidity of collection largely set off the advantages to the cultivator for though the Sikh demand was higher it was seldom collected in full. Previously the proprietary body was the body responsible for the revenue. If they could persuade others to share in this responsibility, the advantage gained was a wider distribution of the burden; the tenants helped to pay the revenue, they did not pay any rent to the owners in addition. The immediate effects of annexation were the maintenance of law and order, security of tenure, a moderate fixed demand, and the encouragement of trade. The province advanced rapidly in prosperity and the agriculturist class found themselves in possession of a valuable property such as they had never known before. The land now yielded a profit in excess of the cultivator's immediate requirements and this margin of produce could obviously form the basis of credit. It was possible to find a tenant who would pay a rent higher than the Government revenue. A difference between rent and revenue began to appear and owners' profits emerged.(1) The land revenue being fixed for a period of years, expansion of cultivation was encouraged so that, for instance in the five years between 1868-69 and 1873-74, the cultivated area increased from 202 lakhs of acres to 226 lakhs and the average revenue on this declined from Re. 1-1-3 to 15 annas 7 pies. At the same time, as the cultivator was beginning to save a profit out of which he could repay debt, the newly established regular courts not only aided the lender in recovering his dues but introduced the novel principle that, whether the land was specifically pledged as security or not, it could be seized in satisfaction of a decree. This power was assumed by the civil courts without legislative authority. In many provinces, Chota Nagpur, Oudh, Central Provinces, Berar, Coorg and Ajmer, there have for long existed restrictions on the alienation of ancestral property. In 1852 the Board of Administration for the Punjab issued a circular requiring a landowner, who wished to sell his share, to offer it, in the first instance, to the whole community, or to some individual

(1) Cf. S. C. Ray: *The Permanent Settlement of Bengal*. "The shares of the zemindars and of the Government in the rental were in the ratio of 1 : 9 at the time of the Permanent Settlement. As the Government revenue in 1793 was nearly 360 lakhs, this represented nine-tenths of the total rental, which was therefore 400 lakhs. Now the present rental is about 1,500 lakhs, which is four times the rental at the time of the Permanent Settlement. The Government revenue being now fixed at, say, 400 lakhs, a sum of 1,200 lakhs is shared between the ryots, the tenure-holders, the zemindars, etc." Obviously a body of men whose rental was 40 lakhs in 1793, could not borrow as much as their successors with a rental of 1,200 lakhs.

co-parcener, at a reasonable rate to be fixed by agreement, failing which the revenue officer and three assessors were to determine the fair value. Later (1858) the sale of agricultural land in execution of decrees was subject to the sanction of the Commissioner. In 1859 the sanction of the Judicial Commissioner was required when the property was ancestral. Later, proposals for sale had to be submitted to the Financial Commissioner. Since 1866 no interest in land could be sold in satisfaction of money debts without such sanction.⁽¹⁾ The first Civil Procedure Code (1859) confirmed the power of the civil courts to attach agricultural land in execution of decrees, but this code was not extended to the Punjab until 1866, and the sections relating to attachment and sale of agricultural land were subject to special modifications in certain provinces, including the Punjab.

Prior to annexation, the system of joint ownership was a powerful factor preventing transfer to outsiders, and the alienation of ancestral property was so opposed to the feelings of the people that it may safely be said that such alienations, though not unknown, were outside the ordinary current of life. So much is this the case that it is difficult to trace examples of transfers; Sir Edward Maclagan, when Settlement Officer of Multan, was able to collect several such examples, but it is not clear what it was which was transferred, as it is well known that the great Sikh Kardars, or farmers of revenue, would not hesitate to replace one cultivator by another who undertook to pay more. It does not appear that there was any transferable right that could be enforced against the Government of the time.

The forced sale of hereditary land for debt was, it would seem, not recognised under Indian rule. The whole spirit of Hindu law is opposed to the control of the individual over ancestral property, and the Punjab Muslims generally follow a tribal law derived from their Hindu predecessors. The sale of land in execution of decrees was almost unknown in the Punjab as recently as 1873-74, and it has never attained very serious proportions owing to the restrictions imposed by law and custom.

The advent of the British into the Punjab was followed by a series of novel features: the land, from being a burden entailing the satisfaction of a crushing State demand, became a valuable property; improved communications opened up

(1) Cf. *Land Administration Manual*, paras. 17, 51.

markets for the sale of surplus produce; a bumper crop instead of being almost a calamity from its effect of rendering surplus produce unsaleable, became a source of enhanced wealth; property of all kinds rose rapidly in value. Further, the introduction of fixed laws and the general security following on the enforcement of order, rendered the land available as the ultimate security for loans. Another factor of great importance was the growth of a money economy and the increase of wealth as trade developed. In the early days, the money-lender did not advance large sums for several reasons: he had not the money to advance: he had not the means to enforce repayment: he did not see with the cultivator any surplus from which repayment could be made. But as the Famine Commission of 1880 reported: "Now, with value of land risen, rights defined and recorded, money-lenders have lent more freely on the security of ascertained interests in land.....There is everywhere a serious amount of agricultural debt, and, at any rate, there is everywhere the habit of running accounts with the money-lenders, which alway slides into debt when a crop is lost or a bullock has to be replaced." Grain itself was of little use in repayment without a certainty of being able to sell it, and until roads, and later railways, brought distant markets within his reach, this certainty did not exist. In 1858 the grain dealers of Amritsar were nearly ruined. Owing to the disturbances of the time, there had been delay in securing payment of the revenue, and two instalments became due together; the *baniyas* advanced the money and took the produce; but the harvest was a bumper one; there was no demand for the stored wheat which became unsaleable and rotted in the godowns. Another disturbing factor obstructing credit was the variation in prices owing to the dependence on local harvests and the absence of the balancing effect of distant markets; it would be impossible a few months ahead to estimate whether the price of wheat would be 30 seers a rupee or 12. The writings of Munro, Elphinstone and others make it clear that there was much debt in India before the British became a power in the land, indeed the Famine Commission of 1880 reported: "We have found no reason to believe that the agricultural population of India has at any known period of history been generally free from debt." But for the reasons stated, it could not have been as great, measured in rupees, as it soon became.

In 1874-75 regular civil courts were established which took over from District Officers and their staffs the settlement of suits for debts against agriculturists. These courts were, for the most part, presided over by Munsiffs recruited from the towns and so ill-versed in rural affairs and customary rights in land. The

complaint that the unsuitability of the civil courts and the civil law are in part responsible for the increase of debt is heard from most parts of India, as well as from other agricultural countries such as France. The peasants, according to Mr. Thorburn, soon came to regard them as agents and debt collectors for the money-lenders. (1)

The latter, however, conspired not for the land, but for the produce. They were intelligent enough to realise that the commercial value of the land was derived from what it yielded and as soon as peace and security brought good markets within easy reach they set themselves to get possession of the grain at the lowest possible price. The simplest method was to get control over the cultivator, and shortly after 1860 a new class of village usurer sprang up, the members of which began to use their superior intelligence and every advantage which the new laws and new courts placed at their disposal to entangle the Punjab peasants in a mesh from which the newly passed Evidence Act would permit of no escape. It is customary to blame the cultivator for improvidence but it is not explained why this characteristic developed after 1849 and has been practically confined to owners, especially to owners of the best lands. The charge of extravagance on marriage expenses was reduced to relatively unimportant limits by the Deccan Ryots Commission, and Mr. Thorburn, Mr. Keatinge and Mr. Datta have corroborated their finding. The old landowner's power of borrowing had been limited not only by the limited nature of the security which he had been able to offer, but also by the uncertainty which attended the recovery of debt in the absence of any law more certain than the pleasure of the ruler. Imprudent borrowing, prior to annexation, had been impossible. Even after annexation it was abundantly clear that a money lender could not rely upon obtaining peaceable possession. Public opinion, in the forcible shape of an indignant crowd, too frequently expressed resentment in a form that could not be misunderstood.

A good many years passed before a written bond or a legal decree supplied anything approaching an assurance of respect for the right transferred. As a matter of fact, the money-lender did not want the land but the crop. The land would have been of no use to him without a cultivator, and so long as land was plentiful and tenants were scarce, the proprietary right by itself was of little value. Two facts illustrate this. In the early years the land sold was nearly all cultivated land; there was little or no attempt to buy up the waste in view of future development. Further, the money-lenders showed no inclination to become

(1) Report on Peasant Indebtedness, 1896.

owners or purchasers of occupancy holdings, as the proprietary right yielded little profit. This latter fact is of great importance in the proper understanding of rural credit. The occupancy tenant is debarred from alienating his rights and yet he not only enjoys all the credit he needs but it is a matter of common observation that he is frequently more prosperous and less involved than the small proprietors among whom he lives and whose right of transfer is less unfettered. (1)

It thus becomes clear that the active factor in peasant indebtedness has been the desire of the village usurer to get hold of the produce. Prior to 1849 there was little or no surplus produce to get hold of; but the British administrators reduced the revenue from the whole of the surplus to a theoretical half and practically about a quarter, and so left the cultivator with a margin which he could dispose of. The existence of this margin gave his land a saleable value. In many Indian States the demand still absorbs the greater part of that margin and transfer of land is, in the majority of cases, almost unknown. A landowner's right to sell would there be useless. Prior to 1849 a mortgage could have been of little value as such a charge requires a settled tenure. With the advent of British rule, the Bengal form of mortgage appeared; by 1874 there were 13 lakhs acres encumbered, of which 10 lakhs had come under mortgage within the previous six years, so that there could have been a very small area so encumbered on annexation. (It must be remembered that the Cis-Sutlej territory was already part of British India before the annexation of the Trans-Sutlej Punjab in 1849, and the Delhi territory was transferred to the Punjab from the United Provinces after 1858.) (2)

Enquiry in 1871 (3) showed that in Gurdaspur 66·4 per cent. of the mortgages were made to money-lenders, but only 37 per cent. of the sales. As the area sold was generally less than half of that mortgaged, there is further evidence that the money-lenders were anxious to secure the produce of the land without assuming the responsibilities of ownership. As was pointed out in 1882, as purchaser of the land he got only the land, but as mortgagee he got the land and a hardworking submissive owner-tenant as well.

(1) The indisputable fact that in earlier days the moneylender would take the cultivator's cattle, but *not his land*, is carefully ignored by those who, in these days, elect to regard the Land Alienation Act as a class measure and a grievance.

(2) Although there is evidence that some sort of encumbrance on rights in land existed prior to the advent of the British, it is abundantly clear that what is now called a mortgage was very rare indeed.

(3) It is not easy to secure earlier evidence. Until a phenomenon excites remark, there are no comments upon it. But about 1858 certainly the *sahukar* was still sharing the vicissitudes of the cultivator and not exploiting them.

Further, it is repeatedly a matter of comment that the mortgages were mostly taking place in districts known to be prosperous and were in favour of money-lenders and that the lands so encumbered were the most fertile; while the sales were in precarious districts and were mostly in favour of other agriculturists. The writers of the early reports found consolation in the comment that the agriculturists only sold their cheaper lands and were able to retain a lien on the better fields; but it was officially admitted that "once in possession, the mortgagee adds loan to loan and interest to interest until the mortgagor, or his descendant, becomes involved beyond the power of extrication by ordinary means and the creditor becomes *de facto*, if not in name, proprietor of the estate." The fact was that the Punjab peasant was being confronted with a new form of credit, and, like his fellow in other countries, he was in danger of being ruined by it. Official enquiries showed that 94 per cent. of the money raised was for unproductive expenditure; "the people," the Report of 1871 says "do not as yet understand the advantage of constructing reproductive works with borrowed money. They mortgage their land in most cases merely to raise money for immediate necessities or to stave off importunate demands" and in the Report of 1874 we read, "the facility of raising loans on mortgage is increasing." At this time it was considered that legislative interference to prevent reckless alienations would be opposed to economic principles, but no authority was given for the suggestion that economists viewed with unconcern the expropriation of peasant proprietors in favour of capitalist landlords cultivating through tenants. Credit is notoriously double-edged and the story of the Punjab fully corroborates Professor Gide's comments: (1) "It has often been said that credit holds up the landowner as the rope holds up the hanged man. . . . It is only to usurers that the loan on mortgage is a profitable business. . . . In those countries where it is practised on an ignorant and improvident population. . . . in Algeria, the countries of the Danube, and in Russia. . . . it does incalculable harm;" and we may agree with him that, if a calculation could be made of the number of landowners ruined as compared with the number enriched by it, its abolition would be called for; and further (2) that "the more

(1) *Political Economy*, p. 394.

(2) *Ibid* p. 397.

The author of this book persuaded the Royal Commission on Indian Agriculture to recommend that no usufructuary mortgage of agricultural land should be permitted by law unless provision were made for automatic redemption within a fixed period of years of which 20 should be the maximum; and the majority of the Punjab Indebtedness Committee, under his chairmanship, supported this (1932). Under the author's supervision two detailed inquiries were made by the Board of Economic Inquiry into thousands of mortgages in Ferozepore and Rawalpindi which disclosed how rare were the occasions when mortgage could be justified on economic grounds.

easy mortgage credit is made the more dangerous will it become and the more surely will the small landowner be delivered into the hands of the usurers." Unfortunately the Punjab cultivators had not then fully realised the truth of the warning of Schulze-Delitzsch to have nothing to do with the man who would offer the deadly gift of easy credit. Mr. Keatinge tells practically the same tale of the Deccan cultivator (1): "the cultivator fell a victim to the insidious ease with which he could raise money on the security of his land and failed to foresee the inevitable day of settlement." Similarly Mr. Datta in his Report on the Rise of Prices says: "with increased wealth in the country there are now more persons with money to lend than before, and they compete with one another in offering loans to the cultivators at lower rates of interest. . . . Land has considerably risen in value, . . . and now forms ample security for a much larger loan, . . . and this increased credit the ryot is far too prone to utilise for foolish and improvident purposes. The temptation is too strong for him to resist borrowing, the dangers of which are unrealised . . . This applies specially to the case of cultivators with small holdings." The Deccan Ryots Commission in 1875 reported that the much-talked of improvidence of the ryots "consists rather in the shortsighted imprudence of an ignorant class ready to relieve present necessity by discounting future income on any terms and unable to realise the consequences of obligations foolishly contracted than in an extravagant expenditure or misapplication of income. The facilities for the recovery of debt offered by our civil courts had called into existence an inferior class of moneylenders dealing at exorbitant rates of interest with the lower strata of the agricultural poor;" ... "another cause of the increase of indebtedness is the facility with which the moneylending class can command the assistance of the law in the recovery of debt, and, consequent upon that facility, an expansion of the ryots' credit, inducing numbers of small capitalists to compete for investments in loans." The Famine Commission Report of 1880 mentions that the classes which have the best security to offer are the most eligible customers of the moneylenders, and further that "a rigid, elaborate legal system has too often proved an additional cause of ruin to the impoverished agriculturists." The Famine Commission of 1901 similarly reported of Bombay that "the unrestricted right of the cultivators to transfer their holdings was an accentuating cause of indebtedness and further that it invariably happens that, when an ignorant and improvident peasantry can dispose, without restriction, of valuable rights in land, the cultivators sink deeper into debt and their property begins to pass out of their hands." The initial

cause of indebtedness was thus the action of the British Government on annexation in conferring clear titles to land and in so reducing the revenue demand as to leave a considerable margin of profit to the cultivators. As Mr. Thorburn says (1): "the agriculturists naturally made use of their expanding credit." The rise in the value of land and of agricultural produce attracted the attention of the regular money-lenders, and the high remuneration from their business led to the petty shopkeepers following suit with money borrowed from the big *sahukars*. Whatever the needs of the people might be there was no lack of lenders to accommodate them. The growing wealth of the province only increased the amount of available capital and in the absence of industrial enterprise the land was almost the only safe investment. The word "investment" is used advisedly. It seems abundantly clear that mere moneylending alone would not have accounted for the heavy sum of indebtedness. The fact was that the lenders did not want their money back so much as they desired to retain a permanent lien on the produce. As already remarked it was the crop and not the principal sum which they wished to see paid into their coffers. The usurer invested his money in the hope of a recurring annual return and seldom pressed for redemption of the mortgage. From the above it is clear that the advent of British rule served to provide a profitable field for the village usurer; prior to this event, the usurer could not have had much opportunity to ply his trade; he could not have had the liquid capital to lend or invest, and he could not have had any security for repayment. To this extent he may be said to be the creation of British rule(2). In Ireland, when absentee

(1) *Report on Peasant Indebtedness*, 1896, p. 73. In some countries, including Ireland, small holders are forbidden to mortgage their holdings beyond a certain amount.

(2) The following extract from the *Imperial Gazetteer of India*, Vol. III, p. 90, sums up the situation for the country generally:—"Generally speaking the agriculture of India is in the hands of small men, and the capital required for the cultivation of the soil is supplied in small sums by small capitalists to men of small commercial intelligence. The peasant in India, as in most other agricultural countries, works on borrowed capital; and the question whether he is more or less indebted than his compeer in other countries is open to discussion, but there can be no doubt that in certain parts of India at least the indebtedness of the peasant is economically excessive. This feature of the agricultural situation is largely the product of the last half-century. On the one-hand, the land, which is the peasant's ultimate security, has risen immensely in value under British rule, and the peasant has been tempted by the enhancement of his security to plunge into unnecessary debt. On the other hand, the increase in the value of the security has had little or no effect on the price of the capital supplied, and the money-lender has utilized the commercial helplessness of the uneducated peasants and their increasing competition for loans to maintain rates of interest which tend to make the business of agriculture impossible. On the one hand, there is excessively wide credit; on the other, excessively dear money; and the agriculture of India has suffered equally from the one and the other." (Published 1907.)

landlords regarded their property solely as a source of rent and tenants were impoverished by uncertain tenure, recurring potato blight and competition for cheap American wheat, there was little room for the usurer. But when the tenant secured fixity of tenure, fair rent and a free right of transfer, and later under the various Land Purchase Acts, became proprietor of his holding, he came into possession of rights which could be used as security for credit. It was possible to exploit him and the usurers flocked to the country. In 1881 before the introduction of the Land Act, that conferred on the Irish tenant farmers rights which are, in the Punjab, akin to occupancy rights, but which were popularly styled the three F's (fair rents, fixity of tenure and the right of free sale of their tenancies), the number of Jews in the Island was 472. By 1911, after the Land Purchase Act had come into force, the number had risen to 5,148. The number of money-lenders registered increased threefold in twelve years.

Turning to the Punjab there is unimpeachable evidence that the prosperity of the agricultural classes has attracted a large number of the trading classes to money-lending. The number of bankers and money-lenders (including dependants) returned at the Census of 1868 was 53,263; at the Census of 1911 this figure had been increased to 193,890. Between the two years, it must be remembered, there had also come into being a large number of agriculturists who added to their income by lending money to their neighbours (1), but who would not be classed as money-lenders.

Some idea of the rapid increase in money-lending in recent years is to be obtained from the Income-tax Returns. The annual reports give the number of persons assessed and the tax assessed. As the incidence of the tax is known, it is a simple calculation to work out the estimated income subject to the tax. To arrive at the capital employed to yield this income is more difficult. The rate of interest varies from 18 to 36 per cent., but while interest is not the only benefit that accrues to the lender it must be remembered that the interest charged is not always paid, and that part of what is collected is expended in litigation and a further portion must be set off against losses. It will probably not be unfair to assume that the net profit (*i.e.*, the taxed income) represents about 12½ per cent. of the capital on loan. This estimate framed in 1922 has since been confirmed by the Punjab Banking Inquiry Committee who reported :

..... "For the Punjab, as a whole, taking into consideration

(1) The figures given are the best available; many money-lenders have other sources of income; on the other hand, many persons returned as traders engage in money-lending. The Punjab Banking Inquiry Committee found evidence of further increase, especially of agriculturist money-lenders.

both secured and unsecured debt, we may say that it is probably between 12 and 13 per cent. We say this with more confidence since the return for the 5,998 money-lenders taxed in 1928-29 gives a net return of 13 per cent."

In the following table incomes below Rs. 1,000 a year are omitted :—

Money-lenders in the Punjab.

Year.	Number assessed to tax.	Tax.	Income subject to tax.	Money on loan.
		Rs. Lakhs.	Rs. Lakhs.	Rs. Lakhs.
1897-98 .. ..	..	3·8 "	150 "	12,00 "
1902-03	8,400	4 "	165 "	13,00 "
1907-08	10,300	4·38 "	188 "	15,00 "
1912-13	12,500	5·13 "	213 "	17,00 "
1917-18	15,035	7·42 "	350 "	28,00 "

Recent figures have been modified by the alteration of the taxable limit. The Punjab Banking Inquiry Committee writing of 1923-29 gave the number of rural money-lenders assessed to income-tax as 5,998, the total capital employed in money-lending as over 13 crores, and the income from money-lending taxed nearly 170 lakhs.

As, up to a few years ago, incomes between Rs. 500 and Rs. 1,000 per annum were also subject to tax, it is a simple matter to estimate now the number of money-lenders earning between Rs. 500 and Rs. 1,000 per annum (1) and to these must be added the few money-lenders earning less than Rs. 500 a year. The result gives a figure somewhere about 40,000 as the number of money-lenders in the province of whom, the Census Report of 1891, stated, 77 per cent. live amongst the agriculturists who are their chief clients. As the average family consists of about 4·7 persons, this agrees with the number (193,890) of money-lenders and their dependants returned at the census of 1921. The above figures indicate, amply enough, the rapid increase in money-lending and in the capital employed. The Punjab Banking Inquiry Committee pointed out that the above estimate of 40,000 money-lenders took little account of agriculturist or women money-lenders; agriculturist money-lenders are estimated to

(1) i. e., in 1897-98, out of 44,594 assesseees under all heads, about 28,000 were earning under Rs. 1,000 per annum and 16,000 more than this.

number 19,000, but it is difficult to hazard a guess at women (1) money-lenders as hardly any pay Income-Tax. The Committee suggested that the more correct figure for money-lenders was at least 55,000. It is, after agriculture, the most important occupation in the province. The income-tax figures show that out of 40,690 assesses in 1917-18 no less than 15,000 were bankers and money-lenders, leaving only some 25,000 for all other professions, callings and industries. The tax assessed on money-lenders was 7.4 lakhs out of a total of 30.7 lakhs, and their income taxed was 350 lakhs out of a total of 750 lakhs. As the number of persons dependent on money-lending is only 1 per cent. of the population, as compared with 5.5 per cent. in other trades, 1.73 public servants, 2.49 professions, etc., and 20.32 industries, it is clear that the *average* income of money-lenders is above that of any other calling. In 1928-29 the money-lenders paid 36 per cent. of the total income-tax paid by business and industry.

The actual total net income is, of course, not ascertainable, but a rough estimate may be framed from the information available. Before the limit of income subject to income-tax was raised from Rs. 500 per annum to Rs. 1,000 per annum, the proportion borne by the total of all incomes of money-lenders between Rs. 500 and Rs. 1,000 to the total of all incomes of money-lenders over Rs. 1,000 was about 15 : 38.

The total net income of all money-lenders earning over Rs. 500 is thus about 500 lakhs of rupees and, if allowance is made for income from money-lending not subject to tax, the total must be well over this sum. The net earnings of the North Western Railway in 1917-18 amounted to 764 lakhs; the net revenue of the major irrigation works in the Punjab for the same year was 267 lakhs. These figures will afford some idea of the relative importance of money-lending in the province compared with the great constructive works of development. There are more tax-payers amongst the money-lenders than are found amongst all others engaged in commerce and trade. All manufactures, other than companies (which are almost negligible), yielded only 575 assesses, paying Rs. 43,000. Barristers, pleaders, etc., to the number of 1,073 paid Rs. 86,251 tax on an income of 28 lakhs. All other professions yielded only 195 assesses who paid Rs. 22,400. The above figures show to what extent the province is dominated by the money-lender. He represents the richest single class. His profits probably exceed those of all the cultivators put together. Beside him, the professional class is inconsiderable; the industrial class is insignificant; even trade and commerce take second place. The Punjab is dominated by the money-lender to an extent unknown in any other province. In the whole of India,

(1) The census of 1931 gives the figure as 1,277.

excluding this province, the proportion of money-lenders to total population is 1 : 367 ; here it is 1 : 100. Although the population of the Punjab is only one-eleventh of the whole, one-fourth of all money-lenders found in British India reside and work here. (1).

Since the first edition of this book appeared, the business of money-lending has received a check. Mr. Strickland found that in the centre and east of the province Sikh and Hindu agriculturists were taking to this occupation. The Punjab Banking Inquiry Committee reported that the money-lender is reducing his business, the chief causes being the legal protection afforded to the peasant class, the rise of the agriculturist money-lender, the rapid growth of co-operative credit societies and the increasing attractions of trade. The same committee estimated the debt of landed proprietors at 117 crores, of tenants and farm servants at 18 crores, and the net profit on this 135 crores at over 16 crores (2).

Before leaving this part of the subject, it may be necessary to make clear that, up till the advent of the British, the "shah" or money-lender was perhaps the only source whence the cultivating class could secure help in time of stress. When a sudden demand was made by one powerful enough to enforce it, it was he who gave credit ; and so great was the obligation felt towards him that *takkavi* was regarded as severing a common bond. But he does not seem to have been able to save the people from the effects of such a calamity as famine, for while these led to starvation, death, migration, ruin and desolation, they do not seem to have led to indebtedness in earlier days. The people sold their cattle and their chattels to the money-lender, and this exhausted their credit, for the land was not sold, being at the time unsaleable. In a period when prices fluctuated to an extent now unknown the money-lender was exposed to great risks of loss. The grain he took might prove valueless if the local market was glutted ; for export to more distant places was not easy or always practicable. The sudden fall in prices in 1858 is said to have ruined the shop-keepers, who had taken the produce in return for payment of the revenue into the treasury : and there were other obvious risks when means for transport and facilities for communications were primitive. Under circumstances such as these, only

(1) The actual figures in 1911 were:—Bankers and money-lenders in British India = 803,560 ; ditto in Punjab = 193,890. Thus in British India outside the Punjab the number is 609,670. These figures include dependants so should be divided by about 5 to yield the workers.

(2) The Land Revenue Administration Report for 1922 (Review) stated that the mortgage debt of the province amounted then to over 37 crores of rupees, and comes to nearly Rs. 127 per cultivated acre, the total cultivated acreage mortgaged being over 29 lakhs of acres. The average land revenue of the province was under Re. 1-8-0 per acre cultivated so that the mortgage was 85 times the land revenue.

exorbitant rates of interest could cover losses ; and, perhaps, such rates were not unreasonable.

The difficulty of replacing the money-lender is illustrated from England where the bankers are willing to lend to farmers on commercial banking terms, but the farmer is unable to provide security of the type required. The farmers ploughings, manurings, sowings and labour are invested in his fields, while the commercial banker wants the security in his safe or in his godown. Moreover even in England the value of the crop is still more dependent upon the season than upon the farmer's skill. To get over the difficulty a new form of security—an agricultural charge—has been created.

In earlier days, of the reasons which induced the cultivator to borrow, the demand for land-revenue by a fixed date would seem to have been one and the need to replace cattle lost by disease was probably another. Mr. Thorburn found that 12 per cent. of the debt was borrowed to pay land-revenue, and 11 per cent. to purchase cattle. In the Report on Co-operative Societies in the Punjab, it is shown that 15 per cent. of the money advanced is for the former object and 18.13 for the latter. The close approximation of the results of two enquiries made 38 years apart is certainly striking.

These two causes were mentioned and discussed at a very early stage in the revenue history of the Punjab. The administration has always boasted of the ease with which the land-revenue has been collected. In the Report for 1870-71 the Financial Commissioner protested against the suggestion that transfers of land were due to the revenue demand ; he asserted that, while in "other parts of India" land was sold for Government revenue "we have never taken such harsh measures in the Punjab." In 1871-72, however, the Lieutenant-Governor was disposed to believe that "in some districts of the Punjab the rigidity of the Government demand may force the people into debt", but in 1875-76 the view taken was that "the revenue system was sufficiently elastic to afford relief to the people where it may be necessary." From 1882 onwards successive steps have been taken to render the system more elastic and more adaptable to the variations in the harvests and the Government of the Punjab has never evaded the difficulties of this problem. It was clearly stated that "the rigid enforcement of the revenue demand, irrespective of calamities of seasons, is no part of its revenue system," but it seems to have borrowed from Agra and Oudh, whence many of its officers were obtained a rather narrower conception of elasticity than was suitable to the new province and many years elapsed before Collectors were given power to suspend the revenue of their own motion. Even now, as the

figures from Co-operative Societies show, there is a great deal of borrowing to pay the revenue. The heaviness of the demand could hardly be a cause for such borrowing, as the province has always been lightly assessed. In 1868-69 the average assessment per cultivated acre was Re. 1-1-3; ten years later it was only 15 annas 3 pies; in 1888-89 it was 15 annas 7 pies; in 1898-99 it was Re. 1-2-0. In 1922 it was Re. 1-8-6 and in 1931 Re. 1-11-9. The increase is due to two causes, the rise of prices of produce and the expansion of the irrigated area. As irrigated land pays a higher revenue its increasing proportion to the whole raises the average revenue. During these 50 years the irrigated area has increased 144 per cent. while the unirrigated area remained practically stationary. The revenue averaged about Re. 1-4-10 per head of population in 1868-69; Re. 1-15-6 in 1931.

The second cause of indebtedness mentioned is loss of cattle. This is sometimes very heavy indeed. In 1877-78, for instance, there was truly terrible mortality. Some districts lost half, some two-thirds, of their stock. "The loss of cattle during the year," says the Report, "was most disastrous, and has made a serious impression on the wealth and comfort of the people." The loss in one district alone would seem to have been nearly one crore of rupees, which was probably more than one-third the sale value of the whole cultivated land in the district. Obviously such a calamity must have led to extensive borrowing and, once in the clutches of the usurer, the peasant seldom gets free. As it was officially admitted that "the loss of agricultural capital annually caused by preventible deaths of cattle is enormous," this may safely be accepted as one of the main reasons for borrowing. Its importance is increased by the urgency of replacing lost cattle if agricultural operations are to be continued and the fact that cattle represent the greater proportion of the cultivator's fluid capital; a cultivator may never in his lifetime buy or sell land and if he sells land he need not replace it. Without cattle he is helpless.

The indebtedness of the Punjab peasantry may thus be ascribed (i) to the sudden enhancement of credit due to new conditions introduced by the British Government, (ii) to the abuse of this credit by clever usurers who encouraged borrowing in order to secure control of the produce, (iii) to the famines of 1861, 1869, etc., and heavy mortality amongst cattle which drove the cultivators to borrow and so involved them in the money-lender's clutches, (iv) to the former rigidity of land-revenue collection accentuated by the tactics of the usurer who seized the whole produce and so compelled the cultivator to borrow afresh for the State demand and (v) to a system of civil law which was unsuitable inasmuch as it favoured the clever money-lender

against the ignorant peasant (1). Of these causes the most important from the cultivator's side is undoubtedly mortality amongst cattle and for this, of course, the responsibility lies with the religious scruples of the people. There are certain diseases of cattle which it does not seem practicable to deal with by ameliorative treatment. When in 1754 cattle plague raged in England an order in Council was issued directing that all infected cattle should be shot and buried four feet deep. The Cattle Disease Act has to a large extent perpetuated this and the Board of Agriculture still insists on the slaughter of animals under certain circumstances though the owners now receive compensation. By these and similar drastic measures, England manages to protect her cattle to an extent which is not possible amongst Hindus and Sikhs and, until those who abhor these measures bring forward equally effective substitutes, it is difficult to see how this heavy loss is to be avoided. In Egypt drastic measures are enforced by government and in the Western Punjab where Muslims number over 90 per cent. of the population it should be possible to introduce compulsory measures of protection.

The assumption, frequently made, that debt is due to poverty cannot be entertained. Debt is due to credit and credit depends upon prosperity and not poverty. Without someone to lend there can be no borrowers and without the wherewithal to lend there can be no borrowing. There must be men with money to lend before a peasantry can become involved in debt. The same thing is said of the American farmer: his present difficulties are due to the fact that he has had too much credit and too easy credit in the past (2). Of the labouring class the Royal Commission on Labour wrote that credit in the sense of borrowing capacity is not the worker's need; it would be nearer the truth to describe it as his curse. The fatal weakness in the present system is the comparative ease with which the worker can borrow sums which he has little prospect of being able to repay.

That the agriculturist is apt to be thriftless is too true and this weakness has been encouraged by excessive facilities for borrowing and by improvident lending. In England the Christian objection to usury forced thrift upon the farmers. Of Burma, Mr. Reynolds told the Royal Commission on Agriculture that the general lack of thrift was the main cause of borrowing and that it was inherent in the religious, social and economic structure of the

(1) Cf. Famine Commission Report, 1880:—"A rigid and elaborate legal system has too often proved only an additional instrument of oppression in the hands of the more wealthy or better instructed litigant and an additional cause of ruin to the impoverished agriculturists.

A critic would add as cause of debt the general insecurity of harvests in a province with a markedly capricious rainfall. This is a milder phase of (iii).

(2) B. M. Anderson before the Montana Bankers Association, 1932.

country. In the Punjab it was almost impossible under the old disturbed conditions of repeated invasions. It is true that a body of small peasant proprietors must borrow at times as they are too often unable to save enough to meet unforeseen calamities ; but the history of the co-operative movement in the Punjab shows clearly that the people need not increase their debt, that they need not borrow from money-lenders and that, under a sound system of credit, they will soon save enough to meet all ordinary needs. Experience further shows that the needs of the cultivator for capital to carry on his industry are ordinarily quite small and certainly much smaller than is often assumed(1). The evidence from Egypt is the same : the real needs for credit on the part of the small proprietor who cultivates his own land without outside labour are far less than has been supposed, and such funds as he has been in the habit of borrowing on the security of his land have been too often devoted to unproductive purposes and to maintaining an extravagant standard of living(2). Poverty and improvidence will not by themselves lead the cultivating class into debt. Enquiries in the Punjab show that the tenant is less in debt than the occupancy tenant, and the occupancy tenant less than the small proprietor and the small proprietor less than a larger one. In short, where the people are too ignorant to make a proper use of borrowed capital, debt follows credit and will increase as credit increases, until reckless lending as well as reckless borrowing are discouraged and the potential borrower becomes learned in the business side of his industry. The feature seems to be general everywhere. The Belgian small proprietor is heavily in debt. Of the American farmer it is said that he has had far more credit than is good for him and that he needs no more. What he does require is cheaper credit, granted with greater discrimination, and safe banks(3).

To return to India ; in 1879 increased credit and increased prosperity were regarded as special causes of indebtedness (4). Mr. Thorburn says that the *zemindar* used not to borrow, or if he borrowed he did so to the extent of his share of the next crop or so only. His self-denial was due not to virtue, but to his want of credit. Now he borrows to the value of his assets ; and further that enquiry showed that alienations were larger in villages with exceptional facilities for borrowing, *e. g.*, near towns or money-lending centres than in villages with fewer temptations

(1) The average loan in a dry (*barani*) tract is about Rs. 60 ; in a well irrigated tract Rs. 80 to Rs. 90 ; in a canal irrigated tract Rs. 120 to Rs. 250. The actual sum varies with the price of bullocks.

(2) Report on Finances and Administration of Egypt, 1913.

(3) Business Men's Commission on Agriculture. Many writers say the same.

(4) Sir T. Hope, quoted by S. C. Ray ; Agricultural Indebtedness, p. 145.

to indebtedness in their midst. Again, whatever the security, *sahukars* must lend, having to employ their capital; villages with evenly certain crops are not less depressed than those with precarious yields, as money-lenders prefer to operate in the former and only invest from necessity in poor land or land yielding exceptionally uncertain outturn. What they want is a good and regular return on their outlay.(1) The Famine Commission of 1901 noted that the unrestricted right of the cultivators to transfer their holdings was an accentuating cause of indebtedness. It invariably happens that, when an ignorant and improvident peasantry can dispose without restriction of valuable rights in land, the cultivators sink deeper into debt and their property begins to pass out of their hands.(2) Similarly Mr. Datta in his monumental Report on the Rise in Prices writes:—With increased wealth in the country there are now more persons with money to lend than before and they compete with one another in offering loans to the cultivators at lower rates of interest. Owing to an increase in prices land has considerably risen in value throughout India and now forms ample security for a much larger loan in comparison with what it would have secured 35 years ago; and this increased credit the ryot is far too prone to utilise for foolish and improvident purposes. The temptation is too strong for him to resist borrowing, the dangers of which are unrealised. This applied specially to the case of cultivators with small holdings.

It seems unnecessary to labour the point further, although there would be no difficulty in bringing evidence from European countries, were this necessary, to prove that as credit rises the tendency is for debt to rise too. The great enhancement in the value of land and of the produce obtained from it, and the marked increase of wealth in the province have already been discussed. The rapid rise in the number of money-lenders, and of the capital employed by them, has also been fully dealt with. If it be remembered that spending follows, and does not precede, borrowing, it will be easy to understand that the improvidence of the cultivators is largely a result of the facilities for borrowing. The fact that they had valuable land that could be sold attracted those possessed of the money wherewith to buy and accordingly sales of land increased rapidly in volume.

Two inquiries involving the examination of several thousands of mortgages have been carried out under the direction of the author by the Board of Economic Inquiry and these have been supplemented by inquiries on similar lines in the village investigations. The results agree that the main causes of mortgages

(1) Report on Peasant Indebtedness, 1896, p. 10.

(2) Cf. Ray; Agricultural Indebtedness, pp. 33-34.

are the absence of direct heirs where the owner has not the usual reason for restricting expenditure, the vagaries of the monsoon, marriages and similar ceremonies. The payment of Government dues is not a cause. That idle capital is a prime cause is indicated by the large proportion of mortgage money that comes from savings from service.

As to the extent of the evil, it is difficult to give accurate figures. From 1866 to 1874, sales averaged about 88,000 acres a year. In the following quinquennial periods the acres sold averaged 93,000, 160,000, 310,000 and 338,000 acres a year. Mortgages amounted to 143,000 acres a year in the first period, and to 212,000, 296,000, 590,000 and 554,000 acres a year in the succeeding quinquennial periods. These figures give an exaggerated view inasmuch as they refer to the total area. The cultivated area may be roughly calculated at half the above. On the other hand, they minimise the evil, inasmuch as they omit the following consideration. In 1866 the sale value was about Rs. 10 per cultivated acre; in 1893 it was Rs. 59; and the consideration for a mortgage rose from about Rs. 10 to Rs. 46 in the same period. Thus between 1870 and 1893 the sale money rose from, roughly nine lakhs to one crore, while the consideration for mortgages similarly rose from nineteen lakhs to 166 lakhs. In 1900-01, 436,000 acres (235,000 cultivated) were sold for 182 lakhs of rupees and 523,000 acres (376,000 cultivated) were mortgaged for nearly 231 lakhs of rupees. These figures are sufficient to show that transfers of agricultural land were increasing at a very rapid rate, and there is ample evidence to show that a large number of these were in favour of the money-lending class. It does not ever seem to have been argued that the new owners would have turned to actual cultivation. There are, of course, instances of these engaging in cultivation, but they are rare. Generally speaking, the old agricultural class was regarded as the source whence should be drawn the actual workers on the soil, and no alternative has been suggested. There was thus no attempt to supplant them. They were to remain, but with their old status of owner replaced by that of tenant.

There is an impression abroad that much that has been described above is peculiar to the Punjab amongst the provinces of India; actually almost every country could show the same disastrous tendency for present proprietors to fall into debt, just as almost every country could show instances of drastic legislation against the usurer. In India the growth of debt almost everywhere approached the limits of credit and when the time was judged ripe for inquiry, this was applied to the whole of the country. Only in Madras, where Hindu law and the Hindu joint family system gave sufficient protection to the holder of ancestral land,

was legislation found unnecessary. The real Hindu attitude towards usury is expressed in the Laws of Manu.

II.—*The Land Alienation Act.*

(Such being the position, it became necessary to devise a remedy. It was recognised that the evil was largely the result of the system introduced by the British with the best of intentions. They reduced the State's share of the proprietary profits of land in order to bring benefit to the landed classes, but the fruits of Government's sacrifices were being diverted into the pockets of the money-lenders.) To a large extent Government was responsible, and Government had to discover a remedy. Inaction, as the Viceroy at the time pointed out, was not an alternative to adopting a remedy, it would be an evasion of responsibility. Palliative or even remedial measures would have been insufficient to meet the gravity of the circumstances; the evil had to be prevented. It must not be assumed that the decision to impose restrictions on the power of alienation was arrived at without full consideration of all the interests involved. For 25 years, as the Annual Land Revenue Reports amply testify, the subject had received unbroken attention, but it was realised that it would be no light matter to restrict a power which had been deliberately and formally conferred. The old-time cultivator had been recognised as full landed proprietor with all the privileges of a yeoman, and in the desire to prevent him from losing his proprietary status nothing could be contemplated that might be regarded by the people as undermining that status. The remedial measures that suggested themselves were somewhat as follows :—

- (i) the demand for land-revenue and its collection could be made so elastic as to remove this from the list of causes that led to borrowing; this has since been carried into effect;
 - (ii) borrowing might be discouraged by limiting the security which the landowner had to offer or by diminishing the facilities for the recovery of debt;
 - (iii) the system of agricultural loans could be extended; it was, however, obvious that these could never replace the money-lender;
 - (iv) the enforcement of inequitable contracts could be refused;
 - (v) the liability of the land and its produce for unsecured money debts could be restricted;
 - (vi) the power of sale or mortgage of land could be restricted.
- Of these Nos. (iv), (v) and (vi) are merely varieties of (ii) and, as the remedies referred to in (i) and (iii) were admittedly

insufficient, it became necessary to concentrate on those referred to in (iv), (v) and (vi).

The refusal to enforce inequitable contracts has been dealt with partly by amending the Civil Procedure Code and partly by the recently enacted Usurious Loans Act; in the Land Alienation Act it appears in the Declaration that mortgages with a clause of conditional sale are illegal.

Similarly the liability of the land and its produce for unsecured money debts has been much curtailed by the liberal exemptions from attachment in execution of civil decrees contained in section 60 of the Civil Procedure Code.

There remain the proposals to restrict the power of sale or mortgage which is now embodied in the Act. It is unnecessary to discuss objections raised at the time but now shown by experience to be groundless, such for instance as that the cultivator's credit would be dangerously restricted. It was realised at the time that transfers, even though forbidden, would not be wholly prevented, but it was hoped and time has justified the hope, that they would be enormously decreased in number.

On the 8th June 1901 the Punjab Alienation of Land Act came into force. It was the result of many years' most careful enquiry and was passed into law amidst gloomy forebodings. The Lieutenant-Governor, Sir Mackworth Young, marshalled the opinions of many eminent revenue officers of the past in support of his own view. He complained that the Act was not due to the initiative of the Punjab Government and indeed went beyond its utmost recommendations and explained that he was refraining from opposition only because "the best experience available" of his own officers was in favour of the measure. All sorts of evil seemed to be impending. The value of land would be depreciated, the provisions of the Act would be disregarded or evaded, the money-lender's trade would become impossible and the borrower would be pinched. In point of fact all these gloomy prognostications proved groundless. The Act was quietly received, apathy was more observable than excitement, no special difficulties were encountered and the new law was soon absorbed into the routine life of the province. Its main provisions are very simple. Sale of agricultural land in execution of a decree is forbidden. Sale of their lands by members of agricultural tribes to others who are not members of these tribes is similarly forbidden; though sanction may be accorded to such sales in special cases. The Bengal form of mortgage, with a conditional sale clause, is rendered illegal and even in the case of old mortgages the conditional sale clause becomes inoperative. All mortgages of land by agriculturists in favour of non-agriculturists are illegal except such as provide for automatic redemption. To obviate

evasion, land may not be leased for a period longer than five years. ✓

Perhaps, in the above summary, the reference to the Bengal form of mortgage may not be understood by the younger generation of readers. It was a peculiarly vicious trap, consisting in an ordinary mortgage with a clause to the effect that if redemption did not take place till a certain year or within a certain period, the mortgage would take effect as a sale. All the money-lender had to do was to say nothing about this clause and refrain from pressing for redemption and in due course he became the owner of land for which he had never paid the purchase price.

The Act caused no undue contraction of credit. The average price of land was Rs. 78 per cultivated acre for the five years prior to the passing of the Act; it fell to Rs. 75 for the next five years but rose to Rs. 98 in 1906-07 and has since steadily continued to rise until it was Rs. 275 in 1919-20 when this book was first published. It steadily rose until the depression set in but is now rising again. It was Rs. 406 in 1930 and Rs. 420 in 1931 per cultivated acre. Confining attention to cultivated acres only, the average area sold in the five years preceding the Act was 162,000; for the next five years (1901-02 to 1905-06) it dropped to 135,000; in the next period (1906-07 to 1910-11) it fell further to 121,000. Since then it has risen and for the period 1911-12 to 1915-16 the average area sold was 140,000 acres. This increase is due to large sales of land by Government in the canal colonies, and does not indicate that there is any tendency for agriculturists to part more freely with their land. The following figures show that these tribes are now actually regaining land :—

The figures
and has

Average area sold in acres.

	By agricul- tural tribes.	To agricul- tural tribes.	Gain or loss.
1902-03 to 1905-06 ..	150,000	149,000	—1,000
1906-07 to 1910-11 ..	170,000	178,000	+8,000
1911-12 to 1915-16 ..	188,000	217,000	+39,000
1916-17 to 1920-21 ..	160,000	185,000	+25,000
1921-22 to 1925-26 ..	173,000	187,000	+14,000
1926-27 to 1929-30 ..	165,900	178,700	+12,780
1931 ..	138,000	144,000	+6,000

(The figures relate to the province as at present constituted. The figures given in the text for the five years prior to the passing

of the Act also relate to the area now included in the Punjab.)

The figures for mortgages are also very striking. The average area of cultivated land mortgaged annually during the five years preceding the Act (1896-97 to 1900-01) in the area now included in the Punjab was 339,000 acres. The annual average for the three succeeding quinquennial periods was 180,000, 211,000 and 226,000 acres, respectively. But these figures are misleading and the result of the Act is more accurately shown in the following table (the figures of which include both cultivated and uncultivated area):—

<i>mortgage decreased</i>		Area mort- gaged by agricultural tribes.	Area re- deemed by agricultural tribes.	Area mort- gaged to agricultural tribes.
1902-03 to 1905-06	..	190,000	178,000	162,000
1906-07 to 1910-11	..	240,000	296,000	219,000
1911-12 to 1915-16	..	264,000	270,000	238,000
1916-17 to 1920-21	..	260,000	280,000	289,000
1921-22 to 1925-26	..	294,000	219,000	270,000
1926-27 to 1929-30	..	300,000	169,700	267,000
1931	..	288,000	118,000	246,800

The figures show clearly that agricultural tribes are gaining by redemption and mortgage far more than they are losing by mortgage. The average mortgage money per acre has increased from Rs. 61 per cultivated acre in 1900-01 to Rs. 106 in 1916-17 and Rs. 163 in 1919-20, since then it has on the whole continued to rise until the depression. It was Rs. 198 in 1930 and Rs. 192 per cultivated acre in 1931. The actual total cultivated area under usufructuary mortgage slowly declined from 3,287,000 acres in 1901-02 to 3,200,000 in 1916-17 and 3,117,000 in 1919-20 rose to 3,481,000 acres in 1931 as a result of the severe depression; the area owned by agricultural tribes and mortgaged must have decreased still more. The percentage of the mortgaged cultivated area to total cultivated area declined from 12.3 to 10.8 between 1901 and 1920. It has since risen to 11.5 in 1931. The district

figures show improvement in the most encumbered tracts and retrogression in some of those previously more free. Thus :—

District.	PERCENTAGE OF TOTAL CULTIVATED AREA MORTGAGED.			
	1900-01.	1916-17.	1919-20.	1929-30.
Gurdaspur ..	25.5	20.9	21.2	19.4
Sialkot ..	25.1	23.5	23.6	24.4
Multan ..	17.7	10.1	9.7	6.6
Amritsar ..	17.0	16.3	16.5	14.7
Gujrat ..	16.1	12.4	11.5	12.3
Kangra ..	16.2	12.9	11.5	11.0
Rohtak ..	10.0	12.3	11.5	12.0
Gujranwala ..	10.0	7.1	9.3(1)	9.2
Jhelum ..	9.0	7.7	6.6	6.7
Karnal ..	7.0	8.4	8.4	9.5
Hissar ..	5.6	8.0	5.8	7.5
Jhang ..	4.2	10.4	10.1	8.3

The explanation of this curious variation appears to be that in the early days of British rule, as already mentioned, the money-lender was most active in the more prosperous districts ; prosperity was the source of temptation. With the passing of the Land Alienation Act this same prosperity has enabled the agricultural tribes to retrieve their former position. In the poorer tracts the land was of little value, crops were precarious and hence the money-lender was less active until the all-round rise of prices gave him security. Rohtak, Hissar and Karnal belonged to the old Delhi Division where the conditional sale mortgage was most common and the rise may be due to the conversion of these into usufructuary mortgages under the Act.

It remains to discuss two objections frequently raised against the Act. The first is that it discriminates unduly against Hindus, and the second that it has failed of its real object inasmuch as it has left the poorer agriculturist at the mercy of the agriculturist money-lender who is rapidly buying him up and reducing him to the status of a tenant. The first objection is easily met. A large proportion of the agriculturists protected are Hindus, and these Hindus outnumber all the non-agricultural Hindus in the

(1) This increase over percentage for 1916-17 is due to the formation of Sheikhpura district, where the percentage is 5.1.

province except the menials. The census of 1921 is not sufficiently detailed to give all the information required but roughly the following figures represent the real position :—

<i>Community.</i>			<i>Notified Tribes.</i>	<i>Not notified.</i>	<i>Total.</i>
Hindus	..	..	2,211,000	4,368,000	6,579,000
Muslims	..	..	6,728,000	4,716,000	11,444,000
Sikhs	..	..	1,508,000	784,000	2,292,000
Total	..	..	10,447,000	10,237,000	20,685,000

The discrepancies in the totals are due to minor tribes not being mentioned in the census.

The objection is, of course, based on the fact that the shop-keeping and money-lending classes, who are also the most thrifty happen to be, in this province, for the most part Hindus, and it is these who are prevented from acquiring land. These consist mainly of the three great castes of Arora (530,000), Bania (256,000) and Khatri (354,000) or 1,140,000 in all. About $2\frac{1}{2}$ million menials and untouchables are also not notified. The main object of the Act is to prevent certain hereditary agricultural tribes from losing their ancestral property, and, thus far, it merely embodies ancient Hindu laws and so can hardly with fairness be described as due to religious discrimination. Further, the Act has its counterpart in other countries, which have the same problem to contend with but which contain no Hindus. The American Homestead Law absolutely reserves from alienation a certain area, usually about 50 acres, which is regarded as necessary for the support of the family(1). Other countries have laws embodying the homestead principle and several follow the Code Napoleon which requires a certain proportion to be handed over unencumbered. The tendency to introduce restrictions on similar lines is increasing.

When the British took over the administration they found cultivators in possession of a right to hold land on payment to the State of a revenue demand which practically amounted to a full rent. If this demand were not paid, the State unhesitatingly evicted the occupant and put in another. The cultivator, in fact, possessed no rights in the land that he could alienate. There was

(1) In Belgium an owner is prohibited from mortgaging that large proportion of his land, the inheritance of which is prescribed by statute.

then no question of the right of a trader to purchase land ; there was nothing worthy of purchase. If the British Government had maintained the land revenue at the old proportion, it is probable that sales would never have reached a volume to attract attention. Thus the fact that, in this province, those desiring to purchase land are mostly Hindus, while the proprietor of the land may be Hindu, Mohammadan or Sikh, is a pure accident of history. Egypt has now its Five Feddan Law, absolutely exempting this area from sale, but the would-be purchasers in Egypt are not Hindus, but Musalmans and Christians.

A great deal of the objection to the Act is based upon the misconception that there is such a thing as a right to buy. The Act curtailed the full proprietary right of certain owners only ; it did not affect any rights of those who were not owners. It certainly severely limited their opportunity to buy land but where unrestricted opportunity to buy has been afforded them by the auction of land in the Punjab colonies they have generally refrained from taking advantage of this. The Act imposes no restrictions whatever on landowners who do not belong to notified agricultural tribes and who own over five million acres of land. So far from the Act being a communal measure there are actually more Muslims than Hindus whose opportunities to purchase are affected ; while if menials and untouchables are omitted there are more Hindus protected than there are unprotected. The complaints of the great trading castes are considerably offset by their refusal to buy land in open auction.

The second objection mentioned above is that the Act has failed of its objects inasmuch as the Hindu usurer has been replaced by the agriculturist money-lender, who is free to purchase as much land as he can from members of his own tribe or from tribes in the same group. To a considerable extent this objection is due to misunderstanding. It is true that the effect of the Act has been to transfer the mortgage business from professional money-lenders to agriculturists but it was never intended that all transfers should be prevented. The power of transfer had grown up to an extent which, though limited by custom, was regarded as dangerous and it was considered desirable to restrict the power just so much as would be necessary to obviate the dangers that threatened. It was never considered that all transfers were objectionable. When an agriculturist, who has more land than he needs, sells some of it to another who has less, or when a landowner desires to raise money for improvement by disposing of a fraction of his estate, the transaction would, in most cases, be beneficial. Similarly objection could hardly be raised to a prosperous agriculturist investing his savings in the manner most suitable to his manner of life, or to an owner of an uneconomic holding, who has gone to Australia.

China, or Canada and there saved money, using this money to buy a few fields so as to make his land sufficient for the support of a family. It must be remembered also that, in the Punjab, land is held by village communities, and free unrestricted sale of ancestral property by individuals has never been allowed by custom. The present law of Pre-emption is only an attempt to put this custom into legal form. If an individual wished to sell land, other members of the community had the first claim; the shop-keeper or trader had no claim at all. This prior claim is too old to be disputed, but it would be quite a new idea to suggest that it only exists where the purchase price is not the result of money-lending. There is still, however, in the second objection this element of justification, that if it were found that a new class of agriculturist money-lender was springing up and was buying out small owners on a large scale and by this means reducing them to tenants, there would probably be ground for considering the advisability of further legislative interference. But it has yet to be shown that such a process is taking place to any appreciable extent. A careful inquiry into sales by members of agricultural tribes during the five years 1922-23 to 1926-27 has recently been made and it showed that there was little foundation for the suggestion that the larger owners were buying out the smaller owners to any considerable degree. Small owners buy small plots from small owners, and larger owners buy larger plots from larger owners. The small owner cannot buy the large plot and the large owner does not want the small one. There was no sign whatever that large owners were "swallowing up" the small ones, except in the south-western districts of the Multan division. Of those who made purchases of land in the five years examined, most bought only two plots; there may be cases here and there of agriculturist money-lenders buying a number of plots but they are so rare as to cause no anxiety at present (1). With a few brilliant exceptions, the new owner, drawn from the professional or trading classes, does not cultivate the land himself; he does not, except as Chakdar in Multan, invest any capital in improving it or devote his undoubted intelligence to the promotion of agriculture, but contents himself with obtaining the best rent he can.

The five million acres owned by those who are not notified clearly illustrates their attitude towards agriculture and the improvement of land and completely dispels the argument that if allowed to buy they would improve the agriculture of the province.

Ireland presents a parallel. After the Napoleonic wars the price of agricultural produce increased greatly. Irish farmers

(1) *A Note on Sales of Land* by C. P. K. Fazal, Assistant Secretary, Board of Economic Inquiry, Punjab. 1931.

felt the full benefit. The population rose rapidly and with it the pressure on the soil. The people lived largely on potatoes and sold their wheat. About 1846 came the potato blight followed by a terrible famine. The old landlord class suffered with its tenants and many were impoverished; the opportunity to buy land attracted speculators from Dublin who had no interest in agriculture. There thus came into existence a new body of landlords whose only interest in the soil was the rent they could get out of it. The old cultivating class clung to its ancestral fields with a tenacity that would be well understood in this province. The new owners wanted a good return on their investment which the old tenants promised, but could not pay, and to this cause is traceable much of the agrarian trouble of the next forty years. No one who has studied the Irish land problem would advocate the unrestricted right to sell by small proprietors. In the Punjab the danger to be avoided and that has been avoided is the submergence of the old hereditary peasant class under the money-lender and their degradation from the position of owner to that of tenant (1).

The case of the agriculturist of the Deccan was clearly described by Sir T. Hope in Council in 1879 (2): —It may be argued, he said, that it is indispensable that the land should be in the hands of those who by their capital, intelligence and industry are qualified to turn it to the best account. If the land be held by a class who, through ignorance, improvidence and want of energy, have burdened their heritage with debt which can never be repaid, and thus have deprived themselves of all incentive to labour and all interest in its results, then the only remedy is to promote a gradual restoration of healthier conditions of society by the bankruptcy and eviction of the people. True as such principles are to Europe, considerable caution is necessary in applying them to oriental life. Those into whose hands the land is passing are not yearning for it in order to improve it by their intelligence, enterprise and capital; most have no wish to invest their capital in comparatively unprofitable agricultural experiments; they prefer to keep the ryot on his land, and extract all they can from him; the punctual discharge of their advance is the last thing

(1) Cf. *Report of the Mysore Co-operative Committee*, 1923: "We came across whole families who, a generation or two ago, owned the land which they now cultivate as tenants for their creditors. This is, perhaps, an extreme instance, but, from the evidence we have collected, we are led to believe that conditions more or less similar obtain in several other parts of the State." Also Cf. Ingram Bryan—*Japan from Within*: The Japanese families' lot is not infrequently made worse by the usurer who preys unmercifully on his victim.

(2) Cf. Ray: *Agricultural Indebtedness*, p. 139. The effect of the Deccan Agriculturists Relief Act was to make the professional money-lender more cautious in advancing loans and the agriculturists more reluctant to borrow where the security of his land was required. The result was a marked reduction of unnecessary borrowing.

they desire, the occupier is reduced by pressure of debt to a tenant-at-will holding at a rack-rent from, and sweated by, his Marwari creditor.

A discussion on economics is not perhaps the proper place wherein to introduce a reference to a political grievance ; but it is difficult to leave this subject without mentioning that the Land Alienation Act is so regarded by a small, but important, section. History does not support them nor does the experience of a single country in the world. Nor does their own ancient law. Where Hindu law prevails, there could be little reason to enact a measure designed to protect ancestral property from alienation by a single individual member of any generation. When land was cheap in the Punjab, the non-agricultural Hindus did not buy it. Prior to 1901 he had ample opportunity to acquire rights, but he preferred that the rights he acquired should be those of a mortgagee, and not a proprietor. The fact is that the desire to purchase land is quite a new feature. It was gathering strength when the Act imposed restrictions upon alienations. From some discussions of the subject, it would be imagined that similar restrictions were unknown elsewhere ; whereas, if anything, they are the rule rather than the exception(1). Certainly they existed under Hindu law and in the customary law of the Punjab. Whether such an Act should be retained in the interests of economic development must depend largely upon whether the people, now excluded from purchase, devote themselves to agriculture in a more progressive spirit than those who now own the land. At present no such tendency is observable, although the total area owned by them is considerable. No reasoned argument in favour of the repeal of the Act has come under notice. That there is a feeling amongst some high caste Hindus against the retention of the Act is undeniable although the great majority of the Brahmins favour it, being protected by it, and this feeling is not confined to the Punjab alone. There was similar opposition to the Bundelkhand Alienation of Land Act (1903) and the Bombay Act of 1901. In Oudh the problem has been dealt with by the Settled Estates Act of 1900.

Mr. M. L. Darling (2) makes two criticisms of the Act which

(1) See, for instance, the case of Belgium, where the ownership of land is strictly regulated by the State. Children have an absolute right of inheritance to a certain part of a parent's holding ; an only child must succeed to one-half of the family land ; if there is more than one child, each of them has a right of succession to an equal share. The proportion of land thus reserved for certain heirs may not be mortgaged or otherwise burdened, and the death duties upon land left to strangers in blood are very high.

It may be added that in England the difficulties in transferring land impose a considerable check upon too frequent alienations. In Roumania they serve almost to prohibit them.

(2) *The Punjab Peasant in Prosperity and Debt.*

deserve notice: the first is that the protective effect of the measure weakens the independence of the protected. To this the obvious answer is that as there is freedom of sale and mortgage within the notified groups, there is ample scope to develop resisting power. The influence of Hindu law and the joint family system on the alienation of ancestral property has been in force for centuries and no prominent Hindu of any caste is agitating for the abolition of these. Again, as has been pointed out, the number of sales of land has always been very small and the total area transferred in a year is always a minute fraction so the protection operates only against a rare temptation. The second criticism is that the Act widens the gulf between country and town and so restrains the townsman from taking a practical interest in rural questions. This is clearly based on a misunderstanding. There are several times more of the trading castes living in villages than in towns and even in the town they number not more than a quarter of the whole. The person inhibited is the village money-lender and outside Multan he has practically never shown interest in agricultural development. There is a total area of over five million acres owned by those who are not members of notified agricultural tribes, of which over three million acres are cultivated, but the owners have not taken the numerous opportunities open to them to evince any marked interest in agriculture, beyond planting a few gardens.

Besides auction sales in the Punjab colonies are free of all restriction, so that there has been more than ample opportunity for the great trading and commercial castes to embark on an agricultural career. If it were otherwise, if these important castes had shown real interest in agriculture and its development on modern scientific lines, if they put capital into the land and produced from it more than their agricultural neighbours then there would be a strong argument for reconsideration; but although there are thousands of owners of land from these castes only a very few have taken a practical serious interest in the development of their estates. The mere fact that most of these non-agriculturist owners let their land to agriculturists on rent should be proof enough of their own belief as to who is best fitted to cultivate it.

Mr. Darling would exclude the Punjab Canal colonies from the operation of the Act; there is much to be said in favour of this as there the land is not ancestral and there is no question of peasants being cheated of their ancient patrimony, but enough has been said in this book to prove the evils of tenancy and to allow capitalists to buy out the present agriculturist holders in the colonies would merely increase the evil. It is not claimed that the absentee capitalist landlord is worse than the absentee

agriculturist landlord; he is certainly not worse but there is always the tendency for one or more of the agriculturist's sons to settle on the grant and cultivate it, while the capitalist's sons will never wield the plough or sickle. In other provinces of India, in Oudh for instance, there are large capitalist landlords of the non-cultivating castes with every opportunity to evince their interest in their estates in a practical way, but the chief result of their existence is a difficult problem of landlord and tenant in which Government is always being asked to intervene, while the material for agrarian agitation offers constant opportunity and temptation to the professional malcontent which he too frequently makes use of to the disadvantage of everyone and the advantage of none.

Finally, it may be repeated that the author, like many others, hopes and believes that the Punjab capitalist will find full field for investment in those industries subsidiary to agriculture which are discussed in another chapter.

CHAPTER XIV.

THE PRICE OF WHEAT.

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India must feed herself—no other country can—Punjab diet depends upon wheat—to the exclusion of alternatives—India a passive agent in fixing price—characteristics of wheat—inelastic demand—experiments in price fixation in England—development of the trade in wheat—former vagaries in price—expansion in area—the post-war price crisis—inflation—control over its export—gambling—prohibition of export—an indefensible measure—danger of interference with the wheat trade—more production wanted—not discouragement—View of the Fiscal and Famine Commissions—Australian wheat—changes since 1921—apathy of the commercial class in their own prosperity—and in fair marketing—storage as a cure for price fluctuations.

When this book first appeared the price of wheat was a matter of acute controversy ; the price crisis of 1920-21 had undoubtedly brought distress to poor townsfolk who found the price too high and yet refused to revert to the cheaper millets which had been their staple food a few years back ; there were some amongst the educated class who thought that the cultivators, curiously enough the cultivators and not the dealers, were getting unreasonable rates and these pressed strongly for Government interference which was finally granted. In the fourteen years that have followed, the arguments set forth in this book have received such wide support that it might seem that this chapter were unnecessary ; but although there are now few who would advocate prohibition of the export of wheat only, the demand for high tariffs and protection has gained strength and agriculture is threatened with incalculable harm. The general issue is dealt with in Chapter XIX, here the argument circles round one only of the numerous products of the Punjab, but as much that is here written applies to other food-grains, it is hoped that the chapter will prove useful in its new form.

The acute controversy of fourteen years ago may have been forgotten by many and be unknown to the younger generation, and it seems desirable that this bit of economic history should be preserved. The fact that India imports wheat has led some to believe that she can import more, but her population is so huge that she can never depend upon imports to feed it and must

increase her production to meet the growing demand from her increasing numbers.

If ever the production of food grains in a normal year becomes sufficient only to meet the normal consumption of such a year, then the spectre of famine will once again raise its head. A bad season will bring a deficit of as much as 40 per cent. in the harvest; a drought will bring worse; past history has shown over how many million acres drought may spread and how many million people may be thrown into a state of pinched unemployment, amounting even to actual starvation. In such circumstances a few lakhs of tons of Australian wheat will avail little except to relieve the sea-ports and their immediate neighbourhood. It is almost unthinkable that the people of the Punjab would be able to save themselves by importing Australian wheat. The modern town-inspired policy of killing India's trade threatens India with disaster whenever the monsoon neglects her fields.

The Punjab has become dependent upon wheat as her one staple article of food; the millets seem to be losing popularity and though eaten by those who cannot afford a whole wheat diet they are now despised by most. A widespread objection to the eating of meat of any kind accentuates this dependence and although vegetables and fruit are taken this is not done in quantity sufficient to relieve the demand for wheat. Where the diet of a people is varied, it is possible to meet a deficiency of one item by partaking of more of another, but where the diet consists in so preponderating a manner of one grain then the price of this is a matter of interest in every household. Wheat and rice are the two great sources of human food for many millions; they differ in one important particular: rice is consumed almost entirely in the country in which it is produced, very little enters into world trade; but wheat is the chief staple food export, a larger proportion of the world's outturn enters into international trade than of any other grain. Of the world's production, half is grown in Europe, yet the larger European countries are all great importers and it is their demand which determines the price obtainable by the grower. England is one of the largest importers and Liverpool is the world's largest secondary market for wheat; it is therefore the price prevailing in Liverpool which determines the world price, for in other places the price tends to be Liverpool price less the cost of transport thither; if profit is to be gained from shipping it to Liverpool it is shipped there; when it is not shipped it is because the local price is nearer to the price at Liverpool than the cost of shipping.

India, before the war, was the fifth in order among exporting countries, but latterly her export trade has declined; at any time her total export was so small a quantity of the world's trade in

India was a passive factor in price fixation

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wheat that it did not affect world prices up or down, and therefore India was a passive factor in price fixation; whether she exported or not did not affect the price at Liverpool, but the price at Liverpool did and does affect the price in India. This is important for several reasons; there are many who would like to ascribe the price in India to local conditions; when it was high articles appeared stating that the land revenue was the cause, when it went low Mr. Gandhi was blamed. The average land revenue in the Punjab is Rs. 1-11-9 per cultivated acre, and if an outturn of ten maunds per acre be assumed then the land revenue is less than three annas a maund, or a negligible part of the price.

When export is prohibited the price depends on internal supply and demand; when it is so high here that it is not profitable to ship it to Liverpool then, again, it is regulated by internal causes; otherwise internal factors have little influence where communications are good.

It is not only the suitability of wheat as food that gives it its world-wide importance; milk is as important and more generally consumed but it is not to any great extent a commodity of international trade. But wheat does not deteriorate rapidly; it can be stored; it can be moved freely about and is as palatable several months after harvest as it is immediately it ripens. Further, it can be graded and classified, and so can be sold without being seen; once the market has adopted a common standard for various grades then it can be bought and sold by description only. It is this quality that makes the price so even throughout the world; unfortunately it is the same feature which makes wheat so suitable a commodity for speculation or *satta* gambling. As there is no hurry to hasten the grain to the consumer for fear of deterioration, speculators can buy and hold it off the market so as to force prices up, and as the demand for consumption is steady the price soon rises if large stores are withheld from sale.

The steadiness of the demand is another marked feature of wheat; it varies little with price and above all it does not increase appreciably with a fall in price. The demand is what economists call inelastic; the result is that while a shortage may send prices up, a surplus brings them down out of all proportion to the quantity in excess. Indeed, it is said, that in a year of normal demand the greater the outturn the less is the total price received; there are few if any alternative uses, so that if the year's yield is above requirements the price falls disproportionately and the producer actually may get less for his whole outturn in a good year than he gets in a normal or poor one. This has been painfully illustrated in recent years when farmers throughout the world have suffered heavily from too bounteous harvests and have had to put

up with disastrously low prices. In the case of other crops, such as tea, rubber, etc., it has been possible to organise the producers to restrict their output, but the individual grower of wheat is such a small contributor to the whole and there are such millions of him that it has not been found practicable to secure combined action. Nothing the Punjab cultivator can do by growing less or more will influence the price he gets; he has to sow six months before he sells and no one can foretell market prices so long ahead, so the cultivator must grow in expectation of being able to sell well. The grower of wheat is one of the most helpless producers in the world's markets. If he decides to restrict his area and grow something else he may find that he has missed high prices at harvest; if he trusts to high prices at harvest he may find himself facing a world glut. Enough has, perhaps, been said to indicate that wheat is not a suitable article for the politician, however well intentioned, to interfere with; he can do little good and may do great harm.

If anyone doubts this last dictum, a study of the history of the subject should suffice to prove the point. For in England governments, politicians and Kings, have tried for centuries to control the price of wheat and it has taken all those centuries to convince some people that wheat is best left alone. For eight hundred years in England various devices were tried to keep the price of wheat at what the King or government thought suitable. For the first four hundred years the aim was to secure a fair price for the consumer, much as is the aim of the politician in India, but the chief result of his effort was to make the farmer turn to other uses for his land; he found that the damp climate of England was ideal for rich pasture and therefore for animal husbandry and he turned his attention to sheep and wool and reduced his area under wheat. It was then that King or Government reached the conclusion that cheap wheat was of little use to the consumer if there were not enough of it; State action had reduced the price, but had omitted to secure the quantity. So for the next four hundred years, governments in England have tried to encourage the farmers to grow more wheat and they are still trying. The English farmer, tired of having his profit from wheat-growing reduced by State action, found that animal husbandry was more profitable; for many years he concentrated on wool, and then, as cattle were improved, he embarked upon the production of beef, milk and forms of milk such as cheese, butter, etc., until when the Great War broke out only about ten per cent. of England's fields were under wheat. When therefore proposals to interfere with the price of wheat in India are revived, as they most certainly will be, the complete failure of eight hundred years trial and effort in England should receive consideration.

Coming back to the Punjab, a few facts may be stated. Before the creation of widespread communications by road and rail, post and telegraph, there was little or no trade in wheat, and its price depended upon local causes and fluctuated widely with these causes. Taking Dera Ismail Khan as a place far away from railways, the records show that in 1842 wheat was sold at 22 seers to the rupee; a good harvest in 1850 brought the price down to 50 seers, while a bad one in 1868 sent it up to 13 seers. A good year brought such a glut that it was practically unsaleable, while a bad season sent the price soaring beyond the reach of the poorer people. In the government records there is instanced the case of the merchants of Amritsar who bought wheat largely from the cultivators in 1858 (having advanced them the land revenue) and were ruined by the rapid collapse of prices following on a supply far beyond the demand.

About 1875 the cultivators of the Punjab were getting only one rupee for 40 or 50 seers of wheat, while 30 seers was fairly normal. It was not only from season to season that the price fluctuated so widely, within a year there might be great changes; in Delhi in 1870 the price was 16 seers in June and 9 seers in January; in the same year at Sirsa June price was 11 seers and January price was 6 seers.

People nowadays find it difficult to understand the state of the Punjab before the present great system of communications was created; there was very little trade between village and town, little enough between neighbouring villages and none of great value between places far apart. Each place consumed what it produced and could find no use for any surplus; a cultivator one year had little to sell and the next could not get a purchaser for his bumper crop. There was no outlet for any quantity above what the immediate locality wanted and so there was nothing to gain from producing it; in short the cultivation of wheat was restricted by the lack of an export market, and it will be restricted again if the export market is put beyond the reach of the producer.

About 1870, the area under wheat in the Punjab, as then constituted, was 5,660,000 acres, or about 31 per cent. of the whole cropped area. The value of the wheat exported was recorded as four lakhs of rupees. With the construction of canals and railways the area increased until by 1895-6 it was 6,260,000 acres, of which over half, or 3·2 million acres was irrigated; this area under wheat was about 32 per cent. of the total cropped. It was estimated that about one-sixth of the produce, or 8·4 million maunds was exported. About 1896 the great (Lower) Chenab canal began to influence the position and other great works followed in succession, so that for the nine harvests of 1912-20 the average area under

wheat was over the nine million acres. This great increase in wheat production had far exceeded that of the population and there was a large surplus annually available for export, so that in the nine years named, from nine hundred thousand to one million tons were being sent out of the province ; for the three years before the war the average was 1,376,000 tons, or five times the quantity exported in the period 1886-1895. The value rose from 168 to 880 lakhs of rupees a year. It was this vast trade that brought such immense increase of prosperity to the Punjab; in the nine years ending 1920 the total value received was over 80 crores of rupees ; this value was paid in manufactured goods, gold, silver and other commodities, and as the commercial classes gained on both import and export they attained wealth previously undreamt of.

It was about this time that the price crisis arose, which led to the agitation for interference with the free trade in wheat. The main effect of the creation of modern communications was the linking up of the Punjab fields with the world's markets and the approximation of the prices received for the produce with world prices ; as it took many years to construct the great works of roads and rail, so the effect of linking the Punjab to world markets also took many years ; from 1860, when India settled down to a long spell of almost unbroken prosperity, to 1920 when that prosperity reached its peak, prices in general steadily rose ; the rise being gradual, the people adjusted themselves to it and little hardship was felt by any class, while the great wealth that was being produced brought additional income to everyone. But the war proved a disturbing factor ; so many men were taken from agriculture and industries to maintain the armies that production in some countries declined and prices rose.

In India there is reason to believe that the inevitable inflation of currency added to the rise. Gold disappeared from circulation ; the war caused a certain amount of doubt in men's minds and the note issue was not too popular. From the armies in East Africa, Mesopotamia, Palestine and Egypt there came demands for more silver rupees and there came a time when it became almost necessary to declare the notes inconvertible. Before the war the coinage of rupees amounted to about 74 million a year. Owing to the scarcity of silver in the country the coinage of new rupees fell in 1914-15 to 18 million and in 1915-16 to 14 million ; the greatest credit is due to the Government of India that they resolutely refused to take the freely urged advice to declare their notes inconvertible and succeeded in getting enough fresh silver to coin 298 million rupees in 1916-17, 225 million in 1917-18 and the enormous total of 501 millions in 1918-19. The currency crisis was passed, but there was considerable inflation ; it was not only silver rupees that had been turned out ; the value of notes in

circulation which was 66 crores in 1914 increased to 153 crores by 1919.

There was yet another factor : during the War there had been imposed some control over the export of wheat until only about 2 per cent. of the amount produced was exported on private account, and as the maximum price for export had been fixed at Rs. 5-8 a maund at Lyallpur, this could not have sent the price up much higher. The War, great currency inflation and short supplies from several wheat-growing countries combined to force up prices, until by the autumn of 1921 there was undoubted distress amongst many people and there were demands for government to do something. Unfortunately the autumn harvest of 1920 had been bad and there was a scarcity of the cheaper millets which the poor eat when wheat becomes too dear for them to buy. To add to the distress the Rabi of 1921 was very poor ; the wheat outturn all over the country was below average, the deficit in India being estimated at 25 per cent., while in the Punjab it was 40 per cent. below normal ; in terms of weight the Punjab yielded 4 crores of maunds of wheat less than the normal. Prices went higher ; at Lyallpur wheat which was selling for Rs. 5-8 per maund in February rose to Rs. 6-9 per maund in June ; then speculation seems to have run wild and there was a sudden rise to Rs. 9-12 in August and Rs. 9-14 in September. Under such circumstances it was but natural that there should have been considerable misunderstanding and unreasonable demands for dangerous remedies. About this time the normal export from the Punjab (either to other provinces or overseas) was about 28 per cent. of the total outturn, and it was urged that if the overseas trade were stopped, prices would fall to a level which would enable the poorer classes to buy. It was difficult to persuade the advocates of this policy that, whatever the causes of the high prices might be, overseas export was not an important one, and that export to neighbouring provinces was a far greater matter than the move to Karachi. It was equally difficult to secure a sense of proportion in the views taken. The War had brought enormous wealth to India ; the benefits had spread over the country and the number of poor and distressed was but a small minority which could best be relieved by charitable organisation. To prohibit export would cut off the Punjab from world markets and world prices and would inflict unmerited hardship on the millions of cultivators of one crop only, leaving all others to make what profit they could out of the situation. Moreover, the high price was not all profit to the producer ; his expenses had increased greatly during the War and he had the right to share in a favourable market to recoup his extra outgoings. Reason reached few ears ; the general ignorance of rural economics was too great to permit of

long views being taken and the Government of India yielded to ill-informed clamour and prohibited the export of wheat.

It was in the above circumstances that the chapter, as it appeared in the first edition, was written. Millions of hard-working cultivators had been sacrificed to town clamour made nominally in the interest of a small minority of poor people who only in recent years had become wheat eaters at all. The importance of the action of government in prohibiting the export of wheat extends far beyond the situation created by difficult times; the poor in whose name the action was taken have probably long ago forgotten it, if ever they knew of it at all. The great outstanding fact of permanent importance is that in a temporary crisis the Government of India were prepared to sacrifice the whole body of cultivators of one of India's main crops to placate a few townspeople. How far the townspeople may remember is matter for conjecture, the great ninety per cent. who form India's rural population are never likely to allow the Central Government, however constituted, to forget its conduct when faced with a clear choice between fair dealing towards the great majority and an attitude of unjustifiable humiliation at the dictates of a tiny urban minority. No one would deny the duty of the Central Government to use its powers in times of great emergency even to the detriment of some of the people, but the latter have every right to receive compensation for the sacrifice they make in the public interest. In the case under discussion, there was no great emergency; it was not shown that the export of wheat was a cause of the high price and indeed the ring was broken by action against those who were withholding stocks from the market; no compensation was even considered to those who suffered.

The action of government was clearly contrary to the best interests of the country at large. It has been shown that in the absence of an outlet for any surplus of wheat that might be grown, there was nothing to gain from its production, and that therefore there was no incentive to increase the area under wheat until an export trade had been established. With the encouragement of an export trade through the creation of an immense system of internal communications the trade in wheat had reached a value of nearly nine crores a year and was one of the main sources of the rapidly increasing prosperity of the Punjab. To prohibit that trade at the behest of a few townsmen, however well intentioned, was hardly a statesmanlike action.

The prohibition was designed to assist the poorer classes by bringing down the price of wheat to a figure within their grasp; but as far as the Punjab was concerned, it was not the export overseas, but that to neighbouring provinces that was draining the

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stocks, and it was never suggested that this should be stopped in the interests of the Punjab poor.

There can be little doubt that any attempt to interfere with the free trade in wheat, such as would result in the cessation of such export, will only force the province back into the old conditions of famine and distress; if the cultivator once again finds that a bumper harvest will make his produce unsaleable he will avoid growing wheat for sale. If the trade were confined to the internal demand then the inelasticity of that demand would soon bring ruin to the producer; it has been explained that even a small surplus of such a commodity causes a disproportionate fall in price, and instances have been given of the slump in prices that occurred when there was no outlet for an extra good crop. If the trade be interfered with the cultivator will adjust his area to meet the changed conditions, and the first sufferers in a poor season would be the very townsmen whose misunderstanding of rural economics had brought the change about. The cultivator would feed his family, and the rest of the people would have to compete for the balance at famine rates. If there is one thing more clear than another it is that India must in normal years produce more food-grains than she needs for her population in order that the first effect of a bad season may fall upon the surplus and not upon the amount available for internal consumption. At present the surplus available for export is small, estimated at not more than ten per cent., and it is not enough to provide a buffer between the people and their food-supply in years of defect. The wise statesman will devote his energies to the increase of food production by every legitimate means and will rejoice in the existence of foreign markets which will pay a price for the surplus over normal demand. To prevent such a surplus from going to a market outside India is to remove from the cultivator the stimulus to produce it and to place the country once more within reach of famine.

That the author is not alone in this opinion will be clear from the reports of two important commissions: the Famine Commission of 1880 discussed the question of prohibiting the export of food-grains with the anxious care which the recent terrible tragedy imposed upon them and declared against it. Since the first edition of this book appeared the Indian Fiscal Commission has supported the views here expounded very clearly:—"The mere prohibition of export of food-grains will not in itself bring food to the people who need it. The problem for those who seek to attack the evils of poverty through controlling the export of food-grains is one of prices. Nothing can be achieved except by lowering the price of food....At existing prices the efficient demand of India is satisfied and there remains a surplus available for export....Were the export market not open, the

surplus would not be produced....If India is to grow enough food to feed herself in bad years, there must be grown a considerable surplus in good years. But no surplus will be grown unless a profitable outlet is provided for it. It follows, therefore, that a free export in normal years is the most advantageous for the food supply of India....We hold, therefore, that in normal times any restriction on the export of food-grains, whether by export duties or by any other means, is contrary to the true interests of the country."

(Since 1921 the position has been radically changed ; the expansion of the area under wheat has almost ceased, and no longer keeps pace with the increase of population ; the overseas export trade has been killed and has little chance of being revived ; lakhs of tons of wheat have been imported from Australia which owing to high protective tariffs has to take what price it can get for its agricultural produce. The freight from Australia to Bombay by sea is less than that from Lyallpur by rail. India has paid crores of rupees for this imported wheat which she is capable of producing within her borders if only effort could be concentrated on increasing outturn instead of devising schemes for stifling it. The population of Australia is but that of a few Indian districts, and it cannot meet any considerable deficiency in India's supply ; when internal prices are high, it will pay Australia to send wheat to the seaports, but Australian wheat will there be met with the high cost of rail transport ; but the variation in the annual total yield of wheat in India is far too great for Australia to meet and few things could be more fraught with disaster than to rely upon her as a source in any serious emergency.)

There remains the simple fact, already explained, that the one reliable means of preventing prices of food-grains such as wheat from rising too high is the production in a normal year of quantities in excess of the internal demand. The Departments of Agriculture in different provinces have done much by the selection of better seeds, and government has borrowed large sums from England and invested them in huge works of irrigation. It is a curious fact that one of the great classes most affected has done nothing ; it is so vital to men of commerce that there should be uninterrupted volumes of trade passing into and out of the country that it might well be expected that individually or through their Chambers of Commerce these would do all in their power to stimulate production. At the very least they should take the lead in condemning and discouraging all malpractices in up-country markets which serve to prevent the producer from getting the fullest price for his article.

That the average outturn of wheat in India is much lower than in other countries is well-known ; that it might be much higher

has been demonstrated by the Agricultural Farm at Lyallpur where on an average of years, yields exceeding 21 maunds per acre have been obtained. The farms at Gurdaspur and Montgomery have similarly given high yields and these appear to be within the capacity of the cultivator to equal and beat. But if greater efforts are to be expected from him he must not be discouraged by false weighings, dishonest brokers, and unwarranted deductions in the market. The diversion of effort from increased production to decreasing costs would not suit the commercial class at all.

Perhaps, as there is still in the minds of some the idea that government should store a year's supply against lean years, a few words may be said here. The capital cost required to purchase such a supply would be in the neighbourhood of thirty crores, and the interest charges would be over a crore a year. In former days, after the terrible scenes of famine-stricken Bihar, the idea of storage went so far as to lead to the construction of the famous Patna gola—a huge hollow building, which was intended to be the first of a series; reconsideration brought the conviction that the idea was not practicable and the gola has never been used to store food-grain; it remains as a monument to good intentions unsupported by knowledge of rural economics.

30 crores
 govt. expenses
 on storage
 1 crore
 Bihar famine
 stricken
 Patna gola

CHAPTER XV.

THE PROSPECT FOR INDUSTRIES.

*The existing position—State-aid—in Europe and Japan—
The cry for industries—capital seeking investment—the future
expansion of industries—possibilities classified—local obstacles—
natural position of the Punjab—capital—management—labour—
example of Japan—objection to factory conditions—inefficiency—
economic serfdom—the baqi system—business experience—marketing
ability—diet as an obstacle to industries—cheap power—the
association of capitals—Punjab companies—industrial banking—
the advance in industries.*

In the preceding chapters frequent references have been made to rural conditions in other countries with a view to extracting therefrom lessons of value applicable to local problems. The position taken up has been that agriculture is and must remain the greatest and most important of all industries and the dominating factor in both the wealth and the welfare of the Punjab. But agriculture alone will not suffice to secure for the Punjab all the advantages that would accrue from the fullest development of its natural resources. It has been shown that, in other countries, small holders require the help of subsidiary industries to enable them to earn a fair livelihood; while in the Punjab such village industries as exist are carried on by separate tribes or castes, and not by the agriculturists in their spare hours. In some quarters there seems to be a desire to see these village industries helped on to a more prosperous footing, not in order to afford occupation for the cultivators, but from a patriotic feeling that their regeneration would reflect credit on the province. The position of the economist is that these ancient industries should be encouraged only in so far as they provide for the workers a better income than they could obtain in any other way, or until some way of earning a better income has been devised. The great defect of all these is that they afford very little opportunity for the employment of capital, skilled supervision and management, and it is only by the employment of more and more capital under such expert control that man can produce more wealth and increase his income. Moreover, individuals working independently, lack the advantages that accrue from specialization and organization including the intricate business of marketing, and so cannot compete on equal terms with others who enjoy these

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*20 crores
govt. expenses
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advantages; in consequence, there is a tendency for the village artisan to be underworked and underpaid.

So long as costs of transport from the factory to the village are high and other expenses of distribution heavy, the independent worker may be able to earn some sort of livelihood, but as these charges decline he will be driven from the manufacture of articles to the repair of articles, and his position will then remain unassailable probably for centuries.

There is, however, a small body of opinion which considers that, in the pursuit of wealth, agriculture may be practically ignored, and that the energies of the people should be directed to the introduction of factory industries on a large scale with a view to a large export trade in manufactured goods. The means to this end are, however, so obscure that those who advocate its adoption have not come forward to support their opinion with their money without external aid. A larger and more influential body realizes that raw materials come for the most part from the soil, and that accordingly a careful examination of these raw materials should be made and experiments should be carried out to test which of them can be profitably worked up, within the province, to a stage nearer to that in which the consumer requires them. Although this is clearly the soundest policy, yet there is hesitation when it comes to a question of bearing the expense of the experiments, and accordingly there has arisen a definite demand for the adoption of a policy of State participation in industrial development, and even of State assistance to industrial ventures. This demand is, in some measure, a reflection of the impression that commonly prevails as to what has occurred in Japan. It is believed that Japan has great industries and is, by their means, becoming a wealthy country; and that it only remains for the Punjab Government to subsidize industries to a similar extent for similar results to follow. The whole problem obviously calls for the most careful examination in all its aspects. Attempts to start model factories in the province have proved a failure and the offer of government to make capital available on loan to industrial pioneers has yielded little by way of success. Where natural conditions are unfavourable, there is little chance of even State-aided industries surviving for long; Japan has found that to compete with countries of greater natural endowments, cheap labour and State-aid alone are not sufficient.

Take, for instance, the cotton industry in low grade yarns. Japan's spinning industry has developed prominently because Japan has had abundant cheap labour, although she had altogether to rely upon foreign cotton. But owing firstly to the rapid rise of wages and, secondly, to Indian and Chinese competition, the low grade cotton industry in Japan has been

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placed in a very difficult position. Not only cotton but also nearly all of the Japanese industries seem to have come to a standstill; even the silk industry seems to be in danger of being gradually surpassed by that of China. In fact, many of the advantages that Japan possessed have disappeared and many disadvantages remain, while new ones are continually appearing. (1)

The problems in certain of these aspects have been examined in the Report of the Industrial Commission, and it is unnecessary to repeat what has there been said; of this province it wrote: "The possibilities of the Punjab are mainly agricultural, but its industries are growing and are spread over many districts. This province possesses special advantages in respect of water-power, which are bound to tell in the future, and its people exhibit a natural aptitude for engineering."

The limitations imposed upon this province by its geographical position have already been dealt with. The great advantages conferred upon England or Japan by their configuration, and the consequent facilities for an extensive coastwise transport system, or the gain to Belgium or Holland from their rivers and canals are insufficiently recognized by some publicists in this country. There is a childlike faith in the power of the State to produce industries by subsidies or other forms of aid, in spite of the evidence available from other countries that if there are to be industries that will last they must be such as exploit some great natural advantage of the locality. Other countries have tried and are trying to encourage their people to embark upon such enterprises, and undoubtedly some measure of success has been secured, but nowhere does there seem to be any result at all comparable to the great industries that have sprung up unaided except by some conspicuous natural advantage. The need for some occupation for the people, alternative to agriculture, is, however, so very important in this province that every measure that promises to help in providing such occupation deserves to be carefully examined and tried out. If what follows seems to be more discouraging than encouraging, it should be remembered that an honest appreciation of difficulties is frequently the best preliminary to ultimate success and that obstacles are best surmounted when clearly seen.

First, as to State-aid, the smaller countries of South Europe afford material that should not be ignored. In pre-war Serbia

(1) There is some confusion between the industries of a country, and the distribution of those industries throughout a country. America is a great industrial country, but its industries are for the most part concentrated in a relatively small number of towns. New York city, for instance, has a greater net manufacturing output than any State except its own and Pennsylvania. Marshall, p. 151. S. Ueyehara. The Industry and Trade of Japan, 1926, p. 218-9.

"the Government has done its best to foster the country's manufactures. To promoters of new branches of industry it has been specially liberal, giving them building lands, allowing them to import plant and raw materials duty free, and reduced railway rates in favour of their goods. . . Nevertheless, the manufactures of Serbia have hitherto been of little account. Most of the factories which figured in official returns were only small workshops, and very few had an annual production exceeding £50,000 in value. The raw material used consisted almost entirely of products of Serbian agriculture." (1)

In Bulgaria primitive manufacture by the old-fashioned methods is still the rule: domestic handicrafts have not yet been displaced by the factory system. "The State has always been alive to the importance of encouraging modern methods, and by a succession of special laws has endeavoured to arrive at the best ways of stimulating industry. But, except in the textile industry which had long existed as a domestic industry in many parts, progress has been slow. . . . The most important provision of the law of 1909 'for the encouragement of Native Industries and Trade' was the establishment of an Industrial Council whose duty it is to advise the Minister of Industry and Commerce as to the granting of privileges.

In order to encourage industries the customs duties on machinery, raw material, etc., were withdrawn, and special facilities were afforded by way of factory sites, railway rates and so on. The Punjab Government has done much more to facilitate industries than many appreciate. In all colony towns, sites are reserved for factories and sold at rates far below other sites in the town; railway sidings are arranged and road approaches are constructed. The number of factories working in the colony area is a tribute to the success of this policy.

In Greece and European Turkey there are no considerable industries, the lack of coal being a great obstacle. In Italy industries were similarly hampered by the absence of coal and large efforts have recently been made to get over this by the use of water-power for electrical works. In this province, however, it is Japan which is regarded as the example to be followed, and as there is much misunderstanding of the economic situation in that remarkable country some details may be given.

1. In that country there is a cultivated area of 15 million acres to support 60 million people, or 1 acre to feed four people. In the Punjab there is a cultivated area of over 30 million acres to support about 23 million people, so that four people have 5 acres to draw food from, instead of 1. The result is that the people

(1) F. O. Handbook.

of this province have ample food for themselves and for export. They can in fact earn a living by producing food, etc., for export which is not possible for the Japanese.

2. In the second place taxation in Japan is very high, amounting in all to nearly 15 rupees (1) a head as compared with Rs. 4-12 in India; the national debt is about 50 to 60 rupees a head. It is thus incumbent on the people to work hard.

In the third place it is doubtful if those who desire to see Japanese success repeated in this province would be prepared to accept the amount of State compulsion and State interference that the Government of Japan found necessary. Those who like to dwell on irksome regulations in India can have no knowledge of the extent to which State interference has been carried in Japan. It is quite certain that no British Government would adopt such unfair methods as are to be found in the Japanese record, but one Indian writer at least seems willing to contemplate a brutal repetition of the merciless sweating of female labour as "a necessary concomitant in the early stages of the industrial growth of a nation." There, however, circumstances were hard. The people were sunk in poverty, the country was overcrowded, the cultivated area was barely sufficient to feed everyone, there was no outlet for the surplus population, and, what is of great importance, the articles manufactured by hand were such as could, for the most part, be better and more cheaply made by machinery and so were not suitable for export. Once the country was opened out to foreign trade (after 1853), the Japanese set about learning all they could, importing Western machinery and copying Western methods. The marvel about Japan is not that she is a great industrial country, (2) but that she has attained her present position in such a very short span. The Japanese Ambassador to the United States told an American audience that in 1913 the city of Philadelphia had an annual industrial output double the total industrial output of the whole State of Japan. Japanese foreign trade is swollen by two important factors. The country consists of a series of

(1) i.e., 10 yen. A yen used to be equal to about Re. 1-8. A yen at par is worth two shillings; before the war $1\frac{1}{2}$ rupees = two shillings. It is important to remember that in the Japanese figures cotton is included twice over; the raw cotton is included in imports and the same material worked up into cloth appears as exports. If Japan is only credited with the value she adds to the raw cotton in manufacturing it into cloth, etc., the resultant foreign trade per head is less than that for the Punjab.

(2) The number employed in factories in 1917 was 1,281,000; of whom 58 to 60 per cent. were females; 10 per cent. were children under 14. The total number of persons employed in factories in India in 1917 was about 1,120,000; the total for the Punjab was 16,000. In 1929 the figures for India were 1,553,000. In 1931 the daily average number of persons employed in Punjab factories was 51,600, of whom 7,500 were females and less than 800 children. There seem to be many more males employed in Indian factories than in Japanese.

comparatively narrow islands facing a large continent, and possessed of sixty harbours open to steamers; such extensive sea communications favour foreign trade. In the second place the new industries cater not for home consumption, but for overseas markets, and hence an unusually large portion of the output is exported. In 1917 the total of exports and imports was 2,638 million yen, or about 48 yen per head of the population. The average for the Punjab for the three years 1916—19 for exports and imports was 8,272 lakhs, or about 41 rupees per head. Both figures omit treasure. As the Punjab is completely landlocked and suffers from disabilities of geographical position already described, there is little ground for despondency. In 1913 the average per head of the total foreign trade (exports and imports) was less than Rs. 33 for Japan and about Rs. 25 for the Punjab. That factory industries are not necessary for large foreign trade is exemplified by the fact that the *per capita* exports of agricultural produce alone from Denmark exceed the above figures. The value of the whole of Japan's exports in 1917 was less in proportion to population than the single article of butter exported from Denmark. It should be possible to admire Japan's wonderful progress without losing all sense of proportion, and certainly without decrying the equally wonderful progress of British India.

That the matter is not free from misunderstanding is clear from the different views of Indian and Japanese writers. In Japan, as in India, there are some who think that a country can export manufactured goods without importing anything. Mr. Robertson Scott, an unusually well-informed and acute observer, says the argument for doing away with foreign imports is pushed to ridiculous lengths. A Japanese writes: some of our statesmen have no idea of the relation of rural Japan to the national welfare, not a little of the present industrialisation is an exploitation of cheap labour, a destruction of craftsmanship and social obligation, and an attempt to cut out the foreigner by the production of rubbish (1). Mr. S. Ueyhara says the industry and trade of Japan, which were over inflated during the Great War have suffered severely from European and American competition. What is greatly exercising Japanese industrialists is the rapid growth of new competition from China and India. The menace of these rivals has become greater during the last few years. From the beginning the development of modern Japanese industries was entirely due to imitation and transplantation of western economic methods. (2)

The following figures show that British India is a far more

(1) *The Foundations of Japan*, pp. 347-8, 369.

(2) *The Industry and Trade of Japan*, p. 308.

important factor in Japanese trade and commerce than is Japan in that of British India :—

VALUE OF MERCHANDISE (1)

Imported into British India from Japan. *Exported from British India to Japan.*

	Rs.	Rs.
1875-76 (single year) ..	53,000	61,000
Decennial average 1875-76 to 1884-85 ..	1,06,000	12,00,000
Decennial average 1885-86 to 1894-95 ..	8,80,000	4,75,00,000
Decennial average 1895-96 to 1904-05 ..	73,76,000	5,58,00,000
Decennial average 1905-06 to 1914-15 ..	2,98,00,000	13,31,00,000
1915-16 (single year) ..	7,56,00,000	18,45,00,000
1916-17 do. ..	13,34,00,000	28,25,00,000
1917-18 do. ..	13,83,00,000	34,16,00,000
1922-3 to 1926-7 ..	16,00,000	48,63,000
average		
1927-8 to 1931-32 ..	17,40,000	26,67,000
average		

To such figures as these the objection is put forward that, while India exports raw materials, Japan exports manufactured articles. The real point, however, is not the state of the articles exported or imported, but the advantage accruing from the exchange. From one view it would appear that, if India imports articles ready for use in exchange for articles which require the expenditure of much labour before they can be used, India is the gainer as so much expenditure of labour is saved for other objects ; but if conditions permitted India to export manufactured goods instead of raw materials, the country would gain the profit accruing from the employment of all the capital, labour, skill and business and commercial experience of her people utilized in transforming the one into the other. But it is far from clear that these necessary adjuncts of successful manufacture exist in the country and are being at present used to less advantage than they would be used under the circumstances contemplated. (2)

The cry for industries does not take origin from the old hereditary industrial classes. These are regarded usually as

(1) Statistics of British India, Volume I, Commercial Statistics. Japanese exports to all countries, except China and America, fell away materially in 1919. "This means that Japan has not realized her opportunity and consolidated her position in the many markets which were thrown open to her manufacturers by European inability to compete during the war. She was obsessed by the desire of obtaining quick and exorbitant profits, and paid too little attention to the quality of her output." Report by H. M.'s Commercial Secretary at Yokohama, quoted in *Mysore Economic Journal*, June 1920.

(2) Some advocates of factory industries seem apt to forget that raw materials may also be the result of capital, labour and enterprise. Of course more capital, more skill and more enterprise are required to advance the raw materials through the various stages to the manufactured article.

Kamins of low social status. They show no marked desire to improve their methods or to increase their exertions with a view to securing better conditions. There is nowhere any large body of this artisan class out of work and seeking new industries as a means of employment. Indeed, as the Fiscal Commission pointed out, the general complaint of Indian industrialists is of a labour supply barely sufficient for their needs. They have developed their factories in a few centres only and have left to others the providing of housing facilities for the imported labour. It is the bad social conditions which discourage the inflow of labour to industrial centres and numerous Indian labourers prefer emigrating from the country to working in an Indian mill. The cry for industries is not due to lack of opportunities for exploiting new ideas or new inventions; nor is it due to any surfeit of technical ability. It originated (a fact which modern critics are apt to forget) in the desire of Government to mitigate the dangers due to the almost complete dependence of the people upon the monsoon. The monsoon fluctuated in character and would, in all probability, continue so to fluctuate involving the whole country in its vagaries so that it seemed inevitable that there must be recurring periods of severe distress, unless, as the Famine Commission of 1880 pointed out, some diversity of occupation could be secured not dependent on the monsoon, whereby the surplus population could be drawn from agricultural pursuits and led to find the means of subsistence in manufactures or some similar employments. In their opinion, this result would only follow upon an increased desire to apply capital to industrial pursuits, and this, in turn, could only arise from a growing conviction that adequate profits would be secured on investments. The Commission considered that there were difficulties in the way of Government guarantee or direct State-aid, but urged that "to whatever extent it is possible Government should give assistance to the development of industry." Since 1880 the situation has changed in a truly remarkable manner. At that time poverty was the basis of the demand for industries which were desired by Government in order to diminish the dependence of the people upon agriculture and therefore upon the monsoon. Since then, however, wealth has increased rapidly—new canals have been constructed, railways have been extended and education has spread—and it would seem that the modern cry for industries is due to the considerable amount of money seeking profitable investment, the desire of educated Indians to partake in manufactures and the number of educated young men, for the most part not agriculturists, seeking profitable employment. But capital and supervision alone will not create industries without labour and the potential labour supply is kept back by

its dislike of industrial conditions, its regular hours and the bad housing. The conservatism of the rural classes, their intense attachment to their village homes and village life must be surmounted by attractive conditions which the industrialist is not yet prepared to offer. The cry for industries is no longer due to poverty, but to surplus wealth and the rise of a class, not traditionally connected with industries, but now desirous of embarking upon industrial enterprise with the laudable hope of increasing wealth. That there has been a great increase of wealth in the Punjab in the last sixty years is obvious to all. The great canals have led to a large increase in the cultivated area, and to a still larger increase in production. Whereas in 1872 the province received only four lakhs of rupees for its surplus grain, in 1913 it received 1,448 lakhs, and in 1918-19 no less than 2,437 lakhs of rupees. In 30 years exports increased sevenfold in value, and imports increased fourfold. The income-tax returns testify to a large increase in the income of the trading and commercial classes. Bankers and money-lenders increased in number fourfold between 1868 and 1911, and their income subject to tax has more than doubled in the last 20 years. The net import of treasure (gold and silver coin and bullion) into India in the 50 years before 1920 totalled 770 crores : latterly it has been 32 crores a year. From 1922, when this book first appeared, to 1928-29, the value of gold and silver coin and bullion imported into India was over 355 crores ; of which it is estimated by the Punjab Banking Enquiry Committee that about 10 per cent. found its way to the Punjab. In November and December, 1917, 13 crores of rupees were absorbed. In the year 1917-18 no less than 23 crores of rupees were coined. Between August 1914 and March 1918 over 40 per cent. of the entire estimated world production of silver passed into circulation in India. These figures relate to India as a whole but, in proof of the contention that the Punjab has been receiving a goodly share of this enormous wealth, the following figures may be quoted :—

Triennial Period			Gold and silver treasure absorbed in the Punjab in 3 years	
1911-12 to 1912-13	..	..	Rs. 1,000 lakhs.	
1913-13 to 1915-16	..	..	,, 1,617 do.	
1916-17 to 1918-19	..	..	,, 2,169 do.	
1920-21 to 1922-23	..	..	,, 1,023 do.	
1923-4 to 1925-6	..	..	,, 1,938 do.	
1926-7 to 1928-9	..	..	,, 1,021 do.	

} estimated.

To understand the meaning of these figures, it must be remembered that they show net absorption, so that the effect is cumulative.

The Punjab entered upon an unbroken era of prosperity after 1895-96 with the opening of the Lower Chenab Canal. The figures for money orders are suggestive :—

Net balance, for the Punjab, of money orders paid in the province, less money orders issued.

			<i>Inland</i>	<i>Foreign</i>
1880-81	..	..	—21,38,0000	—1,63,000
1885-86	..	..	—26,28,000	—1,57,000
1890-91	..	..	—33,57,000	—36,000
1895-96	..	..	—31,28,000	+33,000
1900-01	..	..	+56,56,000	+25,28,000
1905-06	..	..	+59,59,000	+14,93,000
1910-11	..	..	+92,05,000	+43,57,000
1915-16	..	..	+1,18,01,000	+33,14,000
1916-17	..	..	+1,65,63,000	+45,37,000
1917-18	..	..	+2,35,84,000	+58,69,000

The above figures indicate the net gain to the province and show the effect of Punjabis sending to their homes within the province, savings from earnings made outside. They effectively dispose of the old myth of the economic drain. In the last 10 years the total net gain from remittances by money orders alone is over 16 crores of rupees. Deposits in the Post Office Savings Bank have also increased largely, and it is of special interest to note that the average deposit in the Punjab (=Rs. 150) is double the average for the rest of India, excluding the Punjab (=Rs. 75). Later figures are given by the Punjab Banking Inquiry Committee which found an average annual excess of 192 lakhs in money orders paid within the province over money orders sent outside. The deposits in the P. O. Savings Bank had by 1927-28 increased to 395 lakhs.

The rapidly growing mortgage debt and the high price paid for land afford evidence of surplus wealth seeking investment; and the resentment of certain classes against the Land Alienation Act is largely due to their possession of idle money for which they naturally enough desire profitable employment.

The second important cause of the cry for industries is the existence of an educated middle-class competing for occupation. Apart from agriculture, the only considerable means of livelihood in the province are money-lending and the law. From the income

tax returns of 1921 it appeared that 15,035 money-lenders were in receipt of an income above the taxable limit, that the number of all other persons engaged in commerce and trade with similar incomes was 13,039; while there were only 575 persons engaged in manufacture (excluding registered companies) with taxable incomes. Turning to the professions, there were 1,268 persons with incomes above the taxable limit, all of whom, except 195, were barristers, attorneys, pleaders, etc. Mr. Darling in his evidence showed that in the main the same state of affairs continues and money-lending and the law are thus the two most profitable callings and, as the latter offers the higher average income of the two, there is a marked tendency for educated young men to take to it. In the province, as at present constituted, there were, in 1868, 40 pleaders, barristers, etc., of whom 25 were in Lahore. By 1896 the number had risen to about 360; whereas it is now several thousand. One predisposing cause is the rise of an urban middle class which has acquired a taste for a college education. This class has risen so rapidly, and its sons have taken to education so readily, that opportunities for employment are too few for the candidates. At the same time it is worthy of remark that there is a general dearth of trained, competent and well-qualified men in almost every branch of activity.⁽¹⁾ This curious state of things is dealt with in the Report of the Calcutta University Commission. It was found that, while the proportion of students in colleges to the total population of Bengal was roughly equal to that in Great Britain, the proportion of these students to the total *literate* population was ten times as great in Bengal, that is to say, a tenfold larger proportion of literate people goes in for a University course in Bengal than in Great Britain, and, of these again, a far larger proportion takes the Arts course and a very much smaller proportion goes in for a strictly vocational training. The result is the large number of educated young men searching for employment, but not trained for any particular vocation. With these all can feel the greatest sympathy, even though all do not agree with some of the consequences. In England such young men are left to fight their way in the economic struggle. There

(1) There is considerable misunderstanding as to the objects of education. Even in America, says Prof. Marshall, where education has always been taken seriously, it has never been regarded as reaching far, by itself, towards making men efficient in business. It has never given the same prestige as can be obtained by the evidence of keen mother wit, which is afforded by a new contrivance, or a new scheme of organization which is effective for its purpose. (Industry and Trade, p. 155.) The taste of the student and his ideas of the opportunities for earning a livelihood are exemplified by the fact that there are more students in the Law College than in the Medical College and three times as many as in the Agricultural College. In 1921-22 the figures were Law 465, Medical 439, Agricultural 150: while there were 4,341 students in Arts Colleges.

an Arts course is regarded as very much of a luxury which a poor country cannot afford.(1)

Some attempt may now be made to forecast the lines on which industries can be developed with reasonable prospects of profit. In the first place it should be clearly understood that the great industries of Western countries have been based upon discoveries and inventions in the use of coal and iron. The Punjab has neither coal nor iron and so her genius for invention and discovery must find an outlet in uses for the resources of the province. The Industrial Commission rightly pointed out that Indian industries are now, and will be in future, chiefly based on the agricultural products of the country. This is so true that it is apt to be overlooked. The Punjab has little mineral wealth and cannot afford to import heavy raw material from beyond its boundaries; its industrialists must, therefore, study the uses to which its agricultural products are put and the processes through which they go before they are finally ready for consumption, and then come to a decision as to which of these processes are suitable for Punjab industries.

Outside agriculture, forests, stock-breeding and insects (silk, lac, etc.), the province has hardly any raw material for industries.

The following classification does not claim to be complete, but it will serve to indicate the possible lines of development:—

- A. Old—{1. Improvement in existing industries.
2. Development of agricultural industries.
- B. New—{3. New industries based on agriculture.
4. New industries not based on agriculture.

C. Unknown—*e.g.*, industries that may take their rise from some new invention or discovery which can be exploited within the province.

1. The existing industries obviously afford great scope for improvement and deserve first consideration. The chief are weaving, dyeing, tanning, pottery, iron work and wood work, and in these much can be done—

- (a) by educating the workers in their craft so as to improve their technical skill;
- (b) by introducing more capital, in the way of improved machinery, implements and materials, and in the provision of more power;

(1) The history of English industries provides ample illustration of the great influence of economic distress in strengthening resolution, enforcing thrift and savings, stimulating pride in conquering difficulties and driving men to work strenuously to save themselves from lapsing again into the poverty and pain from which by their own efforts they were just emerging.

- (c) by providing the element of intelligent enterprise, supervision and guidance so as to enable the workers to use the capital employed to the best profit ;
- (d) by organising and developing marketing.

In so far as these industries are developed in villages, it is probable that the labour will be supplied by the existing classes of artisans. If the economic position of these people is to be improved, they must produce more wealth, and this end can best be achieved by securing the intelligent control of more capital and more power and by a closer study of markets. At present the goods made are sold within a mile or two of their place of manufacture and beyond the efforts of co-operators little attempt has been made to find wider markets for goods some of which are of real merit.

It may be noted that, as India advances in industrial organization, the manufacture in the Punjab of articles from imported iron will tend to decline, as it will be cheaper to import the manufactured articles than the raw material. This tendency may be defeated if the article is of a special type protected by a patent. The Nahan sugar mills are manufactured in Nahan State from iron and coal brought from Bengal by rail and camel transport, and then distributed by camel and rail to the villages of the province. Clearly it would be cheaper to manufacture these nearer to the source of the iron and coal and send them by rail to wherever the demand existed.

2. Development of agricultural industries.

Instances are afforded by oil pressing, flour milling, cotton ginning, rice hulling, sugarcane crushing, wool washing, tanning, etc. etc., all stages in the preparation of raw produce for consumption. These processes are at present being carried out in a generally inefficient manner. To a considerable extent it is probable that the labour required will be supplied by the agriculturists themselves, as is now largely the case with sugarcane crushing. The most promising lines of development appear to be the introduction of efficient machinery and power in replacement of the hand or bullock driven mill. Already there are over 500 ginning, baling and pressing factories for cotton alone. Several great flour mills have recently been constructed ; and machines for rice hulling are growing in number. Small sugar mills are being introduced and a considerable sugar making industry should grow up in the near future.(1) There is ground for hoping that oil pressing will soon pass from the village bullock mill to the modern power driven machine ; already vegetable oil is being imported into the province as vegetable ghi, and the

(1) New factories for sugar, textiles and cotton manufactures have been erected while this second edition was under preparation.

badly fed cattle would benefit from the retention in the province of the oil-cake. As the total area under oil-seeds in the province is over a million acres, of which over 600,000 are irrigated, there is ample raw material. The main difficulty will be to find a market for the oil not locally required, as it is found to be full of suspended impurities and it has yet to win a good name for itself.

3. New industries based on agriculture.

ml. This class appears to promise the most hopeful results; in the first place, because already the scope is very wide and, in the second place, because there is the ever-present possibility that the climate and soil of the province may be found suitable for other crops, not at this time grown, of great industrial value, such, for instance, as some source of sugar other than sugarcane. The industries that seem to deserve early investigation are sericulture and silk (Japan's largest and most important industry after agriculture); lac; the manufacture of straw board from wheat stalks (bhusa); of paper from rice stalks and hulls; alcohol, as a source of power, from potatoes or cellulose; fruit and fruit preserving, canning and drying; pickles, sauces and vinegar; vegetable and vegetable dessication; bees and honey; castor oil and castor cake manure; poultry and poultry products; perhaps dairying and dairy products; and confectionery based on fruits.

Lac grows naturally in Hoshiarpur to the annual value of about four lakhs of rupees, and can easily be produced in the whole sub-montane tract and in Rohtak and Gurgaon. The common ber (*Zizyphus jujuba*) is a suitable tree and can yield three rupees worth of lac every year. The main obstacle is the objection of high caste Hindus to embark on this industry and the ignorance of the menial castes to whom it is left. It differs from most other industries in that the demand exceeds the supply so that there is little difficulty in marketing the product. Another possibility is the manufacture of an artificial silk from the cellulose of maize stalks, sugarcane refuse and similar vegetable matter. It may be that the immense quantity of cotton stalks unwanted in almost every district may yet be treated to become the popular dresses of Punjab women.

4. New industries not based on agriculture.

ms One industry bridges the gulf between this class and the last inasmuch as, though the raw material is not derived from agriculture, the manufactured product is used in agriculture; this is the manufacture of improved agricultural implements. Examples of the class are petroleum and its derivatives; cement-making; glass making; salt-mining (not, of course, new); iron (Kangra); coal (Mianwali); gold washing (Indus), brick-making, cigarettes, aerated waters, ice and industries based on the utilization of forest products such as turpentine extraction,

paper from wood pulp, medicinal principles, steel implements (Wazirabad), sports (Sialkot), gut (Sialkot) and numerous others.

It will be seen that this group consists of industries for which, to a very large extent, labour will have to be specially trained. None of the existing vocational tribes or castes will hold any monopoly. Very considerable amounts of capital will be required and highly skilled management will be necessary.

Unknown industries may be exemplified by the manufacture of artificial manures, such, for instance, as may be obtained from the fixation of atmospheric nitrogen or the manufacture of new agricultural implements. Another possibility is opened up by the curious reaction of disturbed China which has resulted in the diversion of the trade in animal guts from Chinese ports to Karachi *en route* to America. The Punjab already manufactures good gut at Sialkot and it should be possible to intercept the trade in raw gut and to supply America with the manufactured article.

Having set forth the possible lines of industrial development, it remains to discuss the local obstacles that will tend to limit that development; people may talk glibly about developing an industry which is not at present developed, but this will not be done with any degree of success unless the whole of the factors both local and overseas which may effect such development are borne in mind.(1)

First amongst these is the geographical position of the province of which an account has already been given. The general effect of this will be to protect the home market against competition from outside, to hamper the export of manufactured goods and to reserve to the province the bulk of the work of repair. The extent to which industries will be effected will largely depend on the development of communications and transport facilities within the province. At present it may actually cost less to transport goods from Lancashire to Amritsar than to distribute

(1) Sir Alfred Chatterton in a lecture before the Indian Economic Association said:—"The chief obstacles which militate against rapid industrial progress may be enumerated: (1) The facilities which have been created for sea-borne penetration and the extent to which the commercial energy of the country has been expended on building up a foreign trade overwhelmingly towards the export of raw material and the import of manufactures; (2) The social and religious atmosphere which fosters apathy and pessimism and militates against the growth of a spirit of enterprise; (3) The arrogance of caste which is inimical to co-operation and has caused the intellectual classes to despise productive labour; (4) The comparative failure to attract labour permanently to industries by neglect to provide adequate training, by the adoption of bad methods of recruitment and by expecting it to live under conditions which offer no substitutes for the amenities of rural life; (5) An educational system which fails to develop character and originality and stifles individuality by a stereotyped succession of examinations suitable only for the selection of mandarins. (6) Perhaps of major importance is the isolation of agriculture from industry and the comparatively small extent to which the primitive mediæval methods have been influenced by the work of the engineer and the chemist."

these from Amritsar to the villages. The obstacle to an export trade in, say, cotton cloth will tend to prevent the Punjab manufacturer from expanding his business to the scale required to secure the fullest benefits from the law of increasing returns and from the high specialization and organization that are to be found in Lancashire. Owing to its isolated geographical position, the sparsely inhabited tracts that spread for several hundreds of miles on three sides of it, and especially its distance from the sea, it is unlikely that the Punjab will ever develop industries on the scale attained by Japan. The development of Sind under the Sukkur Barrage Irrigation Scheme should have considerable reactions. The cost of railway and port facilities will now be shared and, it is hoped, cheapened and the newly colonised Sind should offer a possible market for Punjab products. But in the export trade from Karachi Sind will have a clear advantage over the Punjab in the lower cost of transport from field to railway terminus.

The second limit to industrial development is to be found in the amount of capital that is likely to be forthcoming. As has already been shown, there is ample wealth in the province seeking investment and a considerable further sum could be rendered available by ready acceptance of redemption of mortgages, sale of scattered plots of land by non-agricultural owners, and the replacement of the money now employed in money-lending by co-operative credit. It is not exaggerating to say that forty crores could be set free for industries by the expansion of the co-operative movement. But, although there is ample capital for the initial requirements, it is doubtful if it will come forward for investment in industries. Hitherto, the development of the country has been carried on by the use of foreign capital. In all India, in all kinds of joint stock companies, there was in 1931-32 only about 275 crores paid up capital (1) whereas nearly 600 crores of rupees, mostly borrowed from Great Britain, have been invested in railways and canals alone. Since this date the paid-up capital in Punjab industrial companies has failed to reach high figures; the joint stock system is not very popular in the province largely owing to the failure of certain attractive but fundamentally unsound projects. The amount of capital required in big industries is not always clearly realized. Taking the

(1) There has recently been a marked rise in manufacturing companies. In the Punjab the total paid-up capital of companies engaged in manufacture was in 1920 under 41 lakhs. In Japan the paid up capital of 6,677 industrial companies in 1917 was over 1,071 million yen = 107 crores of rupees when both rupee and yen = 2 shillings). Since then, however, there has occurred an extraordinary boom in company promoting. According to the Mysore Economic Journal, since 1914 20,000 companies have been formed with an aggregate capital of 4,000 million yen (say 400 crores rupees). The promoters unloaded their shares on to ignorant country people and, as was to be expected, widespread collapse of unsound concerns resulted.

figures for India, it appears that on the average Rs. 900 are required for each person employed in cotton mills, Rs. 1,863 per person employed in woollen mills, Rs. 2,521 per person employed in high grade woollen mills like those at Dhariwal, and Rs. 8,300 per person employed in railways.

In this connection it must be remembered that Indian investors before the war were very shy of lending money to Government and consequently, as has just been remarked, nearly the whole of the 600 crores required for railways and canals has come from England. In the future it seems unlikely that India will be able to borrow so freely from Great Britain; investment in India is likely to be regarded as less secure under the new regime, and high exchange will make foreign borrowing less profitable to Government. It therefore seems likely that the money required for public works will have to be raised in India.

Thus the development of the province will depend to a large extent upon the readiness of the Indian investor to come forward with his capital for public loans as well as for industrial ventures. The Fiscal Commission were optimistic on this subject; it considered that the difficulty of finding Indian capital, which some years ago seemed to impose a definite limit on the expansion of Indian industries, seems to be vanishing gradually under the influence of new ideas bred of education, new banking facilities, and a new enthusiasm for the employment of capital in industries.

A more serious obstacle to industrial development arises from the scarcity of men trained to perform the duties of supervision and management. Upon the efficient performance of these duties in the higher stages hangs the success of industrial enterprise. Skill and capacity are not gained in the course of an ordinary college education; but, where latent, they can be developed and strengthened by such a course. Experience, however, seems to show that the best training for the future manager is to be acquired in the mill and amongst the men he is to manage. The art is picked up in the atmosphere of industry. It is here that difficulties will appear most insuperable. Without established industries it will be slow work to train young men to manage them. Japan attempted to meet the difficulty by importing skilled managers from Europe and by sending young men to Europe to learn, and a somewhat similar policy will probably be found necessary here just as many Indian-owned mills employ English managers. But industrial leadership is not gained by imitation. It is of little use learning to manufacture things which long established firms can turn out much more cheaply by mass production. There must first be energy, intelligence, capital and enterprise devoted to the production of those things which the province is naturally best

fitted to produce ; when full experience has been gained in the use of these factors in combination, there will be less difficulty in the way of developing new lines of activity. In the absence of trained instinct and experience there can be little hope of success without an amount of artificial protection that will inevitably dull enterprise. In modern industries long tradition and the specialized atmosphere of large manufacturing centres mould the mind into lines that make for success. The aptitudes and faculties that are fairly common, say, in Manchester or Sheffield are almost entirely lacking in the Punjab. There the ambition of young men is stimulated by difficulties which in this province would probably serve but to deter. There is a difference in the attitude adopted towards hardships and obstacles. Most Englishmen believe that these, encountered in gradually increasing measure, develop strength and adaptability of mind ; and the benefits of a public school education are ascribed to the system whereby this training is secured. In India the tendency seems to be to take an exaggerated view of bodily pain and of the inevitable inconveniences of a rough and tumble life. Compulsion is resented ; discipline which lies at the root of all organisation is apt to be under-valued, yet it will be impossible to evolve an efficient industrial organisation without a strongly developed sense of discipline. The fact that life's successes represent merely the few survivors in a struggle where many fail lacks proper appreciation. In Lancashire it used to be a common saying that only two generations separate master and man ; that is to say, that the master of to-day is probably the son or grandson of a mill hand, and his grandson, pampered with luxury, will probably fall back to the position of a wage earner. In America it was said that almost every famous manufacturing concern in the country had been founded by a mechanic, a clerk or similar worker from the lower grades. The idea, then, of a separate manufacturing caste which shall provide the capital and the brains that will find employment for lower caste workers is not likely to develop into fact. The great industry of the Punjab is agriculture ; when capital, intelligence and enterprise come to be applied to its improvement and to the development of industries subsidiary to it, there will come into being a rough, hard school for the training of minds, and those already endowed with natural business genius or originality will push through to the position of industrial leaders. In the beginning only a few such men will be forthcoming, but only a few are required.(1)

(1) Professor Alfred Marshall's *Industry and Trade* is a valuable mine of information as to the conditions that have led to the growth of industries in different countries ; needless to say in no case have protection and Government subsidy been dominating factors in permanent success, though their influence may for a time be great.

In such imitative industries as are to be found in India the number of conspicuous leaders is very small, and even the proportion engaged in management and supervision is not great. Up and down the country, however, will be found men gifted with enterprise, with a natural bent for constructive work and a capacity for steady application which have enabled them to start industries of their own with little capital. Jullundur, Sialkot and Wazirabad are notable centres of several promising manufactures while Batala is rapidly developing a business in agricultural machinery. The writer shares with many others the belief that the Punjab artisan is capable of rising to great heights if properly trained; he has already proved his worth in the Railway workshops and in the repair of motor cars but he will do vastly greater things if more favourably circumstanced.

Taking all factories in India, it appears that of every 100 persons employed, three are employed in direction, supervision and clerical work. Of these the European proportion is 4 and Indian 2.6. The remaining 97 consist of 26 skilled and 71 unskilled workmen.

In the cotton industry the proportion of persons employed is 19 European, 4 Indian (in higher posts), 54 skilled and 41.8 unskilled workmen.

In the woollen industry the proportion is 7 European, 10 Indian (supervision and direction), 2 Indian (clerical work), 57 skilled and 29 unskilled workmen. The difference is due to special conditions, the machinery employed, as already noted, is more expensive, and the wool has to undergo a greater number of processes on its way to the finished article.⁽¹⁾ The actual proportions vary with the industry, but in all the number of persons engaged in superior direction and management is very small.

The next difficulty to be considered is the supply of labour and about this there seems to be some misunderstanding. It has already been pointed out that the demand for industries does not come from the workers or what are called hereditary industrial castes but from capitalists seeking investments and young men seeking suitable employment for their education and capacity.

Although the Punjab is thickly populated according to European standards, and although there is undoubtedly great pressure on the land in many districts, yet there is little sign of unemployed labour seeking work. Already the unskilled work of digging on roads and canals is largely done by special castes from outside the province and by Pathans from the frontier or

(1) For details relating to the New Egerton Woollen Mills Company, Dhariwal, I am much indebted to the courtesy of the Manager, Mr. Lilley. Requests for information addressed to some Indian-managed mills met with a refusal.

strange men from far Baltistan. Of skilled workers there does not seem to be any great surplus anywhere, and, of course, there has hitherto been little opportunity for the province to produce a body of men trained in factory work. As has been shown above, industries require a greater proportion of skilled workers than unskilled, and the lack of these will be a serious handicap. To take unskilled labour and train it will prove a long and expensive task, but, if wise counsels prevail, this will be the best course in the long run. The same difficulty faced Japan when she was trying to create industries in a hurry, and her failure to overcome it has proved costly. As that country is so often held up as a model for the Punjab and India to copy, it may be useful to throw a little light on the situation there, before dealing with the special difficulties in the Punjab.

Japan is far more over-populated than the Punjab and the pressure on the soil is much greater; industrialisation has been in progress for 75 years and still the problem of securing labour is acute. Even when secured it does not become permanently industrial; it does not stay in the factory, and to get it at all it has to be "recruited," that is to say, bound for a term of years. Most of the recruits are girls who come because their fathers want the money (in advance) or because they must earn a dowry before they can hope for a husband or for some similar reason. Of free labour there is very little. Of these girls about 84 per cent. leave the factory as soon as they have worked off the advance or saved enough for a dowry, and return to the land. In earlier days labour was so scarce that it was not uncommon for one factory to steal the labour force of another. If the girls could be lured from one mill compound to another, they were kept by the second mill for its labour force and locked behind barred gates of the mill compound. It is stated that girl workers had to be kept locked up within the compound and that this practice of locking in the female labour still continues in most of the textile mills.

The minimum age for juvenile workers is 14 years, though children over twelve years of age may be employed if they have completed six years at school. The working day for all females and boys is ordinarily limited to eleven hours; it used to be twelve. Now, however, practically all the spinning mills are on an eleven hour basis.⁽¹⁾ Night work is now generally prohibited. Trade Unions were illegal and anyone found attempting to organise labour was liable to severe punishment; but recently the law has been altered to allow them to function within narrow limits.

The one great advantage of Japan was the cheapness of its

(1) Factories working all the year round in the Punjab usually observe the 60 hours a week rule. In seasonal factories the majority of operatives work from 12 to 14 hours a day.

labour ; it had to import its raw materials and find markets abroad for the finished product and it could only manage this by long hours and low wages ; even then it had to confine its activities to manufactures such as spinning, as did not require great skill. During the war, when other nations were diverted from ordinary industrial production, Japan had an almost unique opportunity of gaining markets temporarily left unfilled by the combatants ; she muddled it and now the increasing cost of living, strikes, popular upheavals, and a growing class antagonism are threatening to deprive her of such advantages as she had won. She made the great mistake of forcing the pace beyond the capacity of her people to fit themselves for the work ; she sought to win markets by cheap and low quality goods which could never really compete in price for quality with those offered by other nations. Her labour was not only untrained, it was new to its task. Indian writers seem inclined to underrate the importance of environment in training ; to-day in England if anyone wished to build a new weaving mill in Lancashire he would find an ample supply of labour which had been brought up in the very atmosphere of weaving, which had imbibed weaving technique from its youth upwards and which would be ready to accept at once the necessary conditions. If anyone built a new factory in Devonshire he would find such labour entirely lacking ; there would be men trained in agriculture and in agricultural industries but these would not understand and would find difficulty in learning the conditions and technique of weaving. Japan tried to create where real success can only be ensured by slow and steady growth. The result was a labour supply which was not only apathetic towards anything except the wages, but lacking in interest, slovenly, unable to concentrate, needing frequent breathing spells and constantly requiring supervision. The passion for industries led to night work for girls, appalling conditions, much mortality and great suffering. Now that Japan has been under moral obligation to bring her labour laws and conditions nearer to those prevailing in other countries her production has been threatened. Her one weapon in the international competition for markets was cheapness ; quality was never aimed at. She has relied upon a mass of unskilled labour at cheap rates rather than on skilled workers on a fair wage. She made the initial mistake of concentrating on an ambitious export policy into markets already covered by older and more experienced firms and now must find purchasers outside her boundaries or go under.(1)

(1) For information on these questions, the reader is referred to Moulton : *Japan* ; J. E. Orchard : *Japan's Economic Position* ; G. C. Allen : *Modern Japan and its Problems* ; S. Uyehara : *The Industry and Trade of Japan* ; Reports by His Majesty's Vice-Consuls and the *Japanese Year Book*.

If from Japan, attention be now turned to the Punjab a certain amount of similarity will be found. Although there are more people on the land than are required for efficient cultivation under present conditions, there is a marked reluctance to abandon the land for factory life. The Fiscal Commission noted this shortage of industrial labour as a feature of India as a whole ; it ascribed it partly to lack of housing facilities in the towns and partly to the conservatism of the agricultural classes, their intense attachment to their own homes and the traditional village life and their dislike of regular hours of work and industrial conditions generally. As a result, the Commission stated, labour for industries is sometimes scarce and generally migratory. Further the labour supply recruited from the rural population is necessarily unskilled, and there is a great dearth of skilled labour. An Indian economist writes that the love of easy-going independence, the migratory habits, and the reluctance to submit to discipline and to learn new processes of production, which characterise the Indian workman, explain the paradox that, in spite of her 319 millions, one of the greatest obstacles to India's industrial expansion is the scarcity of labour. . . . Another circumstance which certainly is peculiar to Indian labour is its intermittent character. Generally speaking about 10 per cent. of the labour force in any industry are always absent on "French leave" and not less than 30 per cent. are off at harvest time. Each operative generally takes two or three days' holiday each month and a yearly holiday which may extend from one to three months. Agricultural methods and processes are not such as to train up a class of men who can easily adapt themselves to the more strenuous and exacting occupations of industry.(1) The Royal Commission on Labour wrote that it must be admitted that the Indian industrial worker produces less per unit than the worker in any other country claiming to rank as a leading industrial nation. Inefficiency of the Indian industrial worker is attributable to lack of both physical energy and mental vigour. These are to a large extent different aspects of the same defect, for physical weakness cuts at the root of ambition, initiative and desire. The Industrial Commission dealing with the growing scarcity of labour in most parts of the country ascribed it partly to the effects of plague and famine (now both inoperative) and partly to the sequence of favourable seasons leading to greater expenditure by government and private enterprise, necessitating increased employment. The allusion to the real stimulus which drives labour from village to town is

(1) Pillai: *Economic Conditions in India*. In the Punjab where there are no great factory towns, and factories are scattered along the railway, housing conditions are reported to be on the whole satisfactory.

undoubtedly correct; it is not a desire for industrial work but sheer poverty and lack of a livelihood at home which makes men leave the field for the factory. Of the Punjab the Census Superintendent in 1901 remarked on the tendency for the artisan class to abandon their hereditary occupations for agriculture rather than for the factory. But there is a further matter of importance which seems to account for the distaste for factory conditions which is so generally remarked. This is the state of economic serfdom in which the capitalist class seek to embroil their labour; the Industrial Commission avoided discussing this in detail but referred to the money locked up in a vicious system in the financing of the weaver by his patron and to his incubus the money-lending cloth merchant. The Punjab Census Report for 1901 enters into more detail, and conditions do not seem to have altered for the better since. In the towns the artisan class are entirely dependent on the capitalist class without a customary right to share in the trade profit as compensation such as the village menial enjoys at harvest time; this unsatisfactory state of things arises out of the system of advances to operatives which prevails on a very large scale, and especially in the cities. This system appears generally to be as old as the industry itself and it has grown with their growth until it has become a serious menace to their progress. Thus in the carpet weaving and several other industries at Amritsar, it is said that each master artisan, who has workmen under him, owes from Rs. 300 to Rs. 1,000 to his employer. This debt is called *balance* or *baqi*, and when an artisan leaves one employer for another, the latter must, by the custom of the trade, refund the outstanding advance to the former and thus himself become the artisan's creditor. In addition to this outstanding *baqi*, other advances are from time to time made to the artisan. These are called *kharch* (expenses), and any money due for work done is credited to the *kharch*; anything over and above the sum advanced for *kharch* is credited to the *baqi*, though in practice it is alleged by the capitalists themselves that on the *kharch* account the balance is usually against the workman, whose *baqi* in consequence is constantly increasing. It is admitted that the *baqi* constitutes an unredeemable debt, which the workman can never hope to liquidate, and which thus renders him liable for life-long service to the capitalist, although interest is not charged on the amount outstanding. This system precludes any attempt on the part of the operatives to improve their skill or efficiency for increased earnings would go merely to liquidate the *baqi*. It is small wonder if under this system several minor industries have decayed. Corroborative evidence is to be found in Mr. Badenoch's "Punjab Industries": few customs, he writes, have such a malign influence on the industry

of the province as that of giving advances to workmen. It is a canker which is eating at the root of many industries ; the carpet, cutlery, hardware, weaving industries and salt all suffer from it. . . . By its means an unfair system of competition between different employers is in vogue, a workman being attracted from one workshop to the other by offer of a higher advance ; the more unscrupulous the employer and the longer his purse the greater his chance of success. Large sums are always out on advance to workmen. A saltpetre refinery with a capital of Rs. 50,000 was found to have as much as Rs. 20,000 advanced to workmen. Of this amount, at any time not more than 10 per cent. is recoverable, and considerable sums must be written off every year. Again workmen become so heavily involved that their work loses efficiency. The custom is not confined to the Punjab alone but seems to be fairly general in other provinces. Those who have worked in close touch with artisans in the Punjab appreciate the utter hopelessness of their position when dealing with the money-lender-cloth-dealer. A weaver has both to buy through and to sell through the dealer, and also purchase his necessities from him. On every transaction the dealer gains and the weaver loses. So strong is the hold of the dealer that he refuses to sell the product of weavers who will not buy their needs through him. When the Co-operative Department began to organise artisans for the joint purchase of their raw material, the dealers refused to sell the finished products and still so refuse. It is customs such as this which are strangling the old hand industries, for the manufacturer, large or small, must find a market for his product and the dealers do their best to deny them that market. There is more than a suggestion that a somewhat similar system is spreading into the new factory industries, which seek to bind their workmen to them by involving them in debt from which there is no hope of escape. From of old the artisan has learned to dislike the capitalist and if the latter now complains of the shortage of labour he may find some explanation in the conditions which labour has learned to expect.

It is not intended by anything said above to suggest that the capitalist has no reasonable complaints against his labour ; some grounds for inefficiency have been mentioned, but a serious feature is the irregular attendance at the mill which makes for short outturn. Better results can only be obtained from the skill acquired by continuous practice and it is this which Indian labour avoids. Even where higher wages have been given, the result has been not more regular attendance but less, and there is ground for the tendency of the capitalist to do what he can to keep his labour bound to him. Not all methods are fair ; to pay labour six weeks in arrears is a common but distinctly unfair one.

Enough, perhaps, has now been written to show that the prospect for industries will be seriously handicapped by the supply and quality of labour. It is doubtful if many Indian capitalists would contemplate the reproduction in India of the conditions described in Japan; India is still a member of the League of Nations and has accepted the various regulations for labour arrived at by international agreement. Japan's advantage of cheap labour cannot be repeated in the Punjab where skilled labour is neither plentiful nor cheap, but, in spite of the difficulties, the need for an expansion of industries as a means of increasing the wealth of the people is so great that all fair and reasonable methods of linking capital, enterprise and labour to successful manufactures must be explored.(1)

In these circumstances it would seem that the chief hope lies in training existing labour to be more efficient so that if the existing work can be done by fewer men there will be a surplus available for new industries. In this country the average holding is small; if a man secures 50 acres in a new colony he will either employ labour or let out part of the land to a tenant. Now in England it is found that one farmer with his family will look after 50 acres, and employ no outside labour. Thereafter labour employed is as follows :—(2)

Farms	50—100 acres	..	1·5	employee.
	100—150	..	4	do.
	150—200	..	7·5	do.
Above	300	..	16	do.

so that it would seem that it should be possible to train the cultivators to look after more land without any fall in production. Careful estimates indicate that the Punjab cultivator on dry land works about 120 days a year or less, and on irrigated land not more than the equivalent of 160 days of 8 hours each.

(1) The following extract from a report of His Majesty's Commercial Secretary at Yokohama, taken from the *Mysore Economic Journal*, June 1920, is interesting in this connection: "The economic situation of Japan is pregnant with possibilities of danger; much has been said and written about the unprecedented prosperity of this country, but it is not clearly recognized that practically all this prosperity is due to abnormal conditions consequent on Japan's peculiar position during the war. The spirit of the nation has not undergone any radical change which would warrant alarm in competitive countries. It is true that Japan has attained a greater measure of independence and that her industries have showed considerable development; but hitherto unknown evils, such as labour unrest and fictitiously high cost of living, have arisen as an offset. Added to this there is a growing mania for speculation and company promoting out of all proportion to the needs of the country. Shareholders are improvident in the extreme."

(2) See *International Review of Agricultural Economics*, November-December 1919, pp. 661 ff.; also *Report on Wages and Conditions of Employment in Agriculture*, Cmd. 24-1919. In the Punjab the agricultural system will always require more labour.

In England some considerable improvement has been made in the last forty years in the number of animals the average man looks after :—

<i>Number of cattle per man unit.</i>				1871	1911
Cattle	..	..	..	3	5·4
Sheep	..	..	..	14·2	17·2
Horses	..	..	..	0·63	0·95

This increase of horse-power by 50 per cent. is one of the chief reasons for the increasing amount of work done per man employed.(1) In the Punjab there is no such change. The number of animals kept does not seem to have increased greatly in spite of the increase of population.

One of the causes of Denmark's growing prosperity is the gradual increase in the number of cows per cultivator and the great improvement in the milk yield per cow. The amount of milk produced per cultivator has doubled in recent years.

It would thus at first sight appear that by educating the cultivators on practical lines so as to improve their technical efficiency it should be possible to set free a considerable amount of labour for industries. But, as the Fiscal Commission pointed out, the proportion of workers withdrawn will never be appreciable. In India the number employed in large industrial establishments is not much more than one per cent. of those employed on the land and even if industrial progress were so rapid as to lead to the number being doubled or trebled, the proportion to the total would remain small and there would be no appreciable relief to the pressure on the land for livelihood. Moreover the expansion of irrigation should afford a more attractive outlet, and if ever the demand for milk and ghi results in such a rise in price as to make dairying a profitable industry there would result a further opening for agricultural labour.(2) However, even allowing for further possibilities for employment within agriculture itself, there will be a large potential supply for the factories to draw upon, and there need be no fear that any expansion of industries that can be foreseen will cause any shortage on the land. The numbers are there ; it is willingness to work under factory conditions and the skill to do so efficiently that are lacking.

One other possible source is the towns. No one wandering through an Indian bazaar can fail to be struck with the great waste of time and labour involved in the large number of small shops. The large multiple store has become a common feature in

(1) International Review of Agricultural Economics, November-December 1919.

(2) *Ibid.* In England the number of persons employed per 1,000 acres is : cattle and sheep rearing and milking 115 to 129, milking and cattle rearing 116, predominantly arable 46.

England and if some enterprising people would start large shops on sound economic lines in the towns it is not improbable that a great amount of potential labour would be set free. It may be that this labour would lack physical strength but it should take more readily to the irksome conditions in factories.

A further consideration of importance, restraining the rapid development of industries, is the lack of business experience. Technical training will teach how goods should be manufactured, and an ample supply of skilled labour will enable the process of manufacture to be carried through, but much more will be required if the industry is to prove profitable. For this there will be needed men gifted with commercial aptitude and hard business sense, and, owing largely to lack of opportunities for gathering experience, it will be difficult to select the right men. Modern industry is intensely specialized, and a long apprenticeship is required to instil the proper appreciation of the multitude of sometimes conflicting factors that make for success. Neither in England, nor in the Punjab, nor anywhere else is it the case that the man with capital is necessarily possessed of business ability or of the capacity to manage a large industry. The English lawyers and merchants, like those of this province, put their money into land until the middle of the last century. The sons of wealthy manufacturers have frequently found themselves forced to give over control to men of less education, but possessed of character, adaptability and hard business sense. The British Universities have played a very small part in the industrial history of the country. For the successful establishment of manufactures there is required a quality for which there seems to be no test except that of experience. Japan is now gaining this experience at heavy cost, but it is yet too early to say whether she will ever produce the business ability and other qualities required to enable her to compete on equal terms with the highly organized industries of Western countries.

The great importance of slowly acquired skill and experience is illustrated by the big shipping companies of Great Britain. These have carried specialization to such a degree that they are practically beyond the reach of fair and open competition from other countries, a fact tacitly admitted in the unfair discrimination, subsidies and other measures resorted to by America, Germany and Japan. The policy of free trade adopted in the United Kingdom embodies the consciousness of ability to beat rivals on equal terms; the demand for protection arises from a consciousness of weakness and inability to compete with rivals. Protection may facilitate the establishment of new industries; it will not dispense with the need for high skill, business sense and the other faculties required for successful industry.

One of the most important components of business sense or experience is marketing ability. It is unnecessary to insist upon the obvious fact that, until goods are marketed, their production is seldom of much avail, but there seems to be a tendency to overlook the importance of marketing as an essential concomitant of industrial production. In a large manufacturing centre like Lancashire, where there are a number of mills all approximately similarly situated as regards equipment, labour, management, source of raw material and facilities for export, the success or failure of this mill or of that depends to a considerable extent on the ability of the manager to secure a good market for his goods. It is of little use locking up material, labour and capital in the manufacture of cloth for which there is no sufficient demand; few companies can afford to risk manufacturing for a speculative market, and accordingly the market dominates production. In discussions as to the technical possibility of establishing industries in the Punjab this important feature is apt to be overlooked; it seems fairly easy, for instance, to erect spinning mills that will convert raw cotton into yarn, but the outside world at present demands from the Punjab not yarn, but raw cotton. The cotton spinners, and not the weaving mills, form the market for the produce. The proposal to spin Punjab cotton into yarn within the province involves the discovery of an entirely new market. Similarly the attractive prospect of expanding the oil industry in the Punjab so as to utilise the vast quantity of oil-seeds grown is for the moment almost completely overshadowed by the simple fact that the world's markets demand from the Punjab not oil but oil-seed. Old established firms have secured such a strong position with standardised vegetable oil products, sold mostly under recognised trade names that any Punjab mill seeking to find a market abroad for similar products would find the task almost impossible. The solution rests in exploring the home market first, venturing into the export trade when the manufactured article has been brought to such a high standard of perfection that it can compete abroad on a basis of quality for price. The argument is generally applicable to nearly all possible industries; Punjab products will have to be marketed against the severe competition of rivals, mostly Indian, with far greater experience both in manufacture and in marketing; and of the two, experience in marketing will prove the most difficult to acquire. The infant industry gives little scope to develop the special ability required.

An obstacle to industrial expansion apt to be overlooked is the simplicity of the wants of the people⁽¹⁾; a very large field of

(1) The simplicity of wants is one main cause of the heavy imports of gold and silver in years of agricultural prosperity.

industry, for instance, is concerned with foodstuffs and where the diet is not only simple, but hedged round with religious sentiment, the difficulties of the manufacturer of food products are increased. He could, in the Punjab, put on the market many first class products, but few would buy them. (See Chapter V.)

There is as yet insufficient material to support an opinion as to whether in fact the diet of the ordinary Punjabi is a cause of his low standard of work. Of Indian labour in general, there is no doubt that its efficiency is appreciably lowered through malnutrition, leading to susceptibility to beri-beri, leprosy and diseases of the lungs and bowels. This is not due to poverty, but to the unsuitability of the ordinary diet. A diet of polished rice common in Bengal and Madras is dearer than one of wheat as eaten in the Punjab but the latter affords more digestible food. Recent researches point to the fact that it is not in quantity that Indian diets suffer but in their lack of vitamins and other essentials. There is evidence for believing that goitre, for instance, is due to lack of iodine, that a lack of manganese leads to other ailments and so on. The man with a varied diet usually gets all that his body requires from his food, and the diet of a Punjabi who partakes chiefly of meat, wheat and vegetable is probably the best in India.

But perhaps the greatest obstacle to the Punjab's prospects for industries lies in its lack of cheap power. It is a commonplace that the great manufacturing industries of the world have centred round deposits of coal and iron. Until the discovery of the steam-engine, mining could not be carried on to any great depth as there was no known method of keeping the underground works clear of water; with the advent of the steam pump, this difficulty was surmounted, but previously factories were constructed on the banks of streams and depended on water-power. As soon as this narrow dependence on natural water-power was removed by the discovery of the steam-engine and the advent of a plentiful supply of coal, factories congregated in the areas where coal and iron were to be found, and the fact that in England these were in no case far from the sea gave to British industries a great advantage. In France the main coal fields are confined to the north while the chief source of iron is in Lorraine; the result has been a concentration of French factory industries in the north-east of the country, or near ports or towns connected with the sea by navigable rivers. Omitting these narrow areas, nearly the whole of France is singularly devoid of great factory industries.

Germany remained poor and backward relatively to England and France until after 1850. In 1870 she seized from France the provinces of Alsace-Lorraine, with their rich iron fields, and was then enabled to use her coal mines in conjunction with the newly

acquired iron to build up large industries. The German Empire, it has been well said, has been built more truly on coal and iron than on blood and iron. The skilled exploitation of the great coal-fields alone made possible the development of the steel, chemical and electrical industries which established her as the first industrial nation of continental Europe.(1) Under the Peace Treaty the iron mines of Alsace-Lorraine reverted to France, and special provisions were inserted to ensure to the latter a large supply of German coal. Italy has no coal and is dependent on supply by sea and so new industries lie at the mercy of the coal-owning nations. She is now turning her attention to the utilization of her vast water-power. Japan has considerable quantities of iron ores, and in addition has more coal than she requires and exports her surplus; she also has considerable water-power. The Punjab has no iron mines, although there is iron ore in the country; there is coal, but not apparently of very good quality, and most of the coal consumed in the province is imported, and the absence of facilities for cheap transport by sea or river must always involve a very heavy handicap on industrial development dependent on power.(2) Such coal as there is, is in the west of the province, the iron is in the north; the great central plain yields neither of these. There is vast untouched water-power in the Himalayas, but this is far from any present centre of industry. The hope that the Attock oil-fields might supply all the fuel required for industrial expansion has vanished and the Hydro-electric scheme seems now to be the only possible source for power.

From the foregoing discussion it must not be concluded that the prospects for industries in the Punjab are very dark indeed. The various considerations discussed indicate the improbability of the establishment of large centralised factory industries, they suggest that more is required than capital and educated young men. Government can start factories, but it cannot build up an industrial organization; this must inevitably be of slow growth. Nothing that Government can do will dispense with the need for capitalist enterprise with, of course, its ups and downs of loss and gain. It can show the way by means of pioneer factories, but it cannot instil the peculiar faculties and aptitudes that distinguish the successful businessman. The general discussion of industries is apt to be confined too much to questions of technical possibilities, and accordingly stress has been laid on those factors that are essential to success in a world of fierce competition. It

(1) J. M. Keynes : *The Economic Consequences of the Peace*, ch. IV.

(2) The Bombay Mill Owners' Association is constantly stressing the need for reasonably cheap coal laid down at their doors without which they cannot hold their own in the market. Its members are always pressing for special facilities from coal-field to Bombay.

must be remembered that the war has imposed on nearly all peoples the necessity of greatly increased production if the enormous financial burdens are to be borne; this increase can only be attained by the more efficient use of the human material available, and there will accordingly be so much the less opportunity for those not so fully efficient to extract a living out of industries affected by international competition. It will take years for the people of the Punjab to accumulate the experience, acquire the skill and develop the faculties necessary for large factory industries. But there is ample scope for the employment of capital, skill and enterprise in activities for which the province possesses special facilities. The preparation of hides, for instance, offers great scope, and there are other industries requiring relatively little coal and little skilled manual labour. Tanning, for instance, requires little or no coal and many of the obstacles that face other industrial lines are absent here. Raw material is plentiful and only caste prejudice lingers in the path. Similarly there are numerous industries, dependent not on power but on chemical processes, which should be persistently investigated by the enterprising capitalist. But it will probably be found that the immediate future offers the best chances in those which are subsidiary to agriculture and it will probably be found that the devotion of the resources of the province in men, intelligence, capital and enterprise to these industries will provide ample training ground for the faculties required in other pursuits. If the Punjab is to have a great industrial future, the beginnings must be small, the foundations carefully laid and construction must not outpace the capacity of the people. Little but failure and disappointment will result from any attempt to compress six hundred years of the industrial history of Europe into a short period of State subsidized activity.

One other important consideration deserves to be discussed at some length. For great industrial enterprises, and in less measure for most manufactures, there must be association of capitals. It so happens that, in England, the foundations of her prosperity were founded by single men or partnerships, and the limited liability company did not appear until the further efficient exploitation of her mineral resources became impossible without the utilization of more capital than one man or a partnership cared to risk or, perhaps, had at command. The joint stock principle in commerce and manufacture took its origin in the claim of the Crown to grant monopolies of trade. In the seventeenth century this led to the institution of the Chartered Company, of which the East India Company is a well-known example. For some time this charter was confined to associations dealing on a scale, or in an enterprise, which was deemed to be

beyond the scope of private action. The claim of the king was later transferred to Parliament, which thereafter alone could grant monopolies of trade. The Bank of England is an example of such a grant. The Chartered Company was composed of members whose liability was unlimited, and it was only gradually that the idea of a limited liability partnership was able to secure parliamentary approval. Acts of the first half of the nineteenth century permitted the principle in special cases only; and even the general Limited Liability Act of 1856 excluded banks and insurance companies from its scope. This was altered in 1859. Thus for 250 years the system of charter with unlimited liability prevailed, and this period did not prove sufficient to train the people up in those rules of association which are acknowledged to be essential to successful combination. In this province the few generations that have elapsed since settled law and order provided the opportunity for industrial and commercial enterprise on a large scale can hardly be regarded as ample for the same purpose, and accordingly there is to be found considerable misunderstanding on the objects and necessity of company law. The Indian Companies Act is designed to facilitate, not to hinder, the formation of companies on the joint stock principle with limited liability. But it regards the interests of all parties, and not only those of the company. It seeks to provide a constitution that will protect the shareholders against their directors, and the directors against charges from the shareholders; it seeks to build up confidence amongst creditors and others by insisting on proper accounts, audit and publicity. It surmounts the difficulty of joining a large number of persons in litigation by creating a legal corporation, that can sue and be sued and hold property. Further, it apportions liability and responsibility for acts done and duties to be performed. The actual restrictions are the conclusion of prolonged experience not only in England, but throughout the world, and so may be regarded as representing the necessary minimum. Unfortunately, however, there is lacking full recognition of this view. The promoters of companies incline to resent the conditions which are intended to assist their enterprise to lasting success. They seek to omit this safeguard and that, especially those intended to protect others against themselves. The result is that the joint stock system enjoys little favour; there were in 1932 only 343 companies registered in the Punjab, and few of these were engaged in any manufacture. Confidence grows but slowly; industrial concerns are very few in number and failures are distressingly frequent. The remedy, of course, is to insist on more strict compliance with the conditions which the accumulated experience of the world has found to be necessary for by no other means can confidence be built up. The joint stock

company must become a popular means to the development of the resources of the province, for the simple reason that there are not enough private capitalists with sufficient wealth to carry on the work. But this popularity must be won from a doubting and hesitating public by honest work and well-earned success. At present, the investing public seem unable to differentiate between the sound company and the most obvious fraud, and neglect almost completely to take advantage of the facilities afforded them by the law to acquire the information needed for prudent transactions. Actual interest in the affairs of a company in which they hold shares seldom reaches to the extent of attendance at a general meeting; very few seem able to understand a balance-sheet. The attitude of the public toward joint stock enterprise must undergo a marked change before great industries can arise. Hitherto, the company idea has been largely a caste idea as inspection of the shareholders' lists will show and there is still point in the following remarks which appeared in the Census Report for 1901: The inherent incapacity to combine for a common object, characteristic of Indian society, has rendered the Joint Stock Company system less successful than it might have been, and success is only assured in cases where the company consists of men of the same caste, or rather of men of the same section of a caste. Of this there is an excellent illustration at Amritsar in the piece-goods market, recently constructed by a Syndicate, whose members are almost exclusively Banias of the Nauria got, and it may be conjectured that in the future the Joint Stock Company system will be to a great extent grafted on to caste organisations.

Of 79 companies in the province in 1922, 14 were under British management with a paid-up capital of 247 lakhs of rupees; 65 were under Indian management with a paid-up capital of 78 lakhs. Only 20 were engaged in manufactures with a paid-up capital of 40 lakhs. The following table indicates the slow growth of confidence :—

<i>Year.</i>	<i>No. of Companies.</i>		<i>Paid-up Capital.</i>
			<i>Rs.</i>
1889-90	..	22	39,60,000
1894-95	..	20	47,80,000
1899-00	..	52	74,10,000
1904-05	..	59	1,01,80,000
1909-10	..	136	1,72,06,000
1914-15	..	99	1,42,70,000
1919-20	..	79	3,25,14,000
1922-23	..	130	2,19,67,000
1929-30	..	252	3,97,32,000
1930-31	..	285	3,66,56,000

There has thus been a revival from the collapse of 1912 and

following years but the paid-up capital remains small. The paid-up share capital of all co-operative societies in 1934 was 198 lakhs.

Connected with this question of the readiness of Punjab capitalists to combine for industrial undertakings is the problem of financing enterprise. When it is intended to start another factory of a well-known type, there is usually sufficient knowledge of the type to induce people to subscribe shares in the company ; but when it is contemplated to embark upon some entirely novel enterprise then the public are shy of risking their money and the potential industry may be lost from lack of financial backing. Experience seems to suggest that the people of the province are too slow to combine for a pioneer industry and too ready to build more factories of a type which has succeeded, as is found in the case of ginning. In other countries the initial finance frequently comes from a body of men styled financiers or financial houses (in England) or combined into Industrial Banks (in Germany). In both the basic principle is the same, namely, that the necessary finance will be forthcoming on terms if any new invention or design or discovery satisfies the financing body that it possesses a business chance of success. The originator of the enterprise, invention or discovery takes his project to such a body, who have it examined by experts from every point of view, the practicability of the scheme on a manufacturing basis, the possible market for the new goods and the chances of such profit as will recoup the initial losses and allow of a fair return for capital and risk.

In a world of competition, sound schemes will ultimately find supporters, but as marketing depends so much on the popular taste, and as popular taste varies so much, great caution is necessary before deciding to risk the capital on building a new factory. Moreover, although the new invention or design may catch the public taste for a time, it may be superseded by further discoveries or better designs ; the financing body has to face risks ; if it hit on a success it is usually able to recoup itself by floating a company to which it sells its rights, but if for any reason, the enterprise fails it has to shoulder the loss. What is lost on one venture it hopes to recoup on the next. It is this willingness to face loss and risk capital that makes for rapid progress ; without it industrial progress must be slow. In the Punjab, and indeed in India generally, there are too few wealthy men imbued with the spirit of enterprise to finance all the possible lines along which industry might expand ; in Bombay it is perhaps possible to find support for new schemes, and western India owes much to the enterprising people of that presidency, but outside Bombay their number is few. It is extremely doubtful which way the Punjab will solve the difficulty—the partnership of capitalists in a financing

house or their association in an Industrial Bank. The name "Industrial Bank" has unfortunate associations owing to the starting of companies on lines which bear no resemblance to those on which such institutions have proved successful in Germany, and for the sake of those who wish to contribute their share to industrial enterprise a brief description of an industrial bank may be given.

The first point of note is that the shares are of large dimensions, a thousand rupees or more, and of this three-fourths are paid up; on the security of the one-fourth share loans may be raised by deposit, debenture or long-term investment. Deposits for short terms are kept low, but they are useful to enable the bank to reduce its working capital when business is slack as they can be returned to their owners.

An Industrial Bank, then would have a high subscribed capital, say one crore, divided into shares of one thousand rupees each, of which Rs. 750 would be paid up and the balance left at call to cover loans. Such a bank would need as its directors men whose success in industry had proved their capacity for enterprise and upon whose judgment reliance could be placed by the shareholders. This bank would be prepared to consider schemes submitted to it to exploit some invention, to market some new design, to start some new industry or even to enable a flourishing small industry to expand its output. The scheme would be scrutinised by the directors and other experts in all its possibilities, much as the possibilities of industries have been examined in this chapter; if the risk proved too great the scheme would be rejected; if financial success appeared reasonably probable then the bank would agree to finance the enterprise on its own terms. These would include financial control over the whole scheme and general control over the entire venture in its initial stages if the scheme were to be carried through by private enterprise, the original inventor, designer, etc., being limited to the actual manufacturing side even if so much. If prospects suggested a joint stock company as the best method then the bank would hold a majority of the shares and directorships. In this way the expert opinion at the call of the bank would continue to be available; such a bank would only part with shares to the public when the enterprise had proved so successful that a large profit from the sale of shares could be assured, or when the capital sunk was wanted for another enterprise promising better profits. Such a bank would expect to lose a lakh on one venture and to recoup on another; great gains are not won without great risks, and the risks usually come before the gains. Under the law, its enterprise would be protected by patents so that it would be secure from rivals for a long period if it hit on a financial success.

The industrial bank has nothing whatever to do with commercial banking and should be kept rigidly separate from it ; the latter deals with capital provided by depositors who have left it for short periods or at call, and so must confine itself to short-term business ; the industrial bank works with its own capital for the most part and only with the borrowed or deposited capital when its business renders this suitable to itself. Whether such a bank will ever rise in the Punjab must be left to the people, but the lack of one suggests a sharp limit to the " demand " for industries, for a demand which does not take shape in effective action is not a real demand at all. As present indications point, it would appear that there is more likelihood of a small number of individuals combining in partnership (not as a regular company) to finance projects, and these are not likely to possess the capital required for many ventures.

To fill the gap the Punjab has passed an Industrial Loans Act to provide loans for industries, but as the Government is dealing with public money it has to defend the public from risks of loss and therefore has to demand security which it is frequently difficult, if not impossible, to provide ; in the Industrial Bank this risk is covered by the control over the venture being retained in its own hands, but as Government can hardly assume responsibility for industrial ventures it must protect the tax-payer in another way. The demand for security is often the last thing the inventor or designer or man of enterprise can meet as he needs all his resources for his own share of the scheme. State industrial loans will never become a substitute for either the financial house or the industrial bank. In all schemes the best security is the opinion of experts formed after the most careful scrutiny backed by their willingness to risk their own money.

In the foregoing pages the discussion has shown that no immediate relief from the present economic position can be expected from the development of industries. There are many factors necessary to success, and no amount of State-aid or State-protection can produce everything as with a magician's wand. It is not denied that the State could, by heavy expenditure, bring about a rapid change, but the advantage would not be lasting, the subsequent collapse would be inevitable and the losses would be very great. The example of Japan shows the great danger of the artificial stimulus of industry where all the necessary factors are not present in the proportion required. During the great war Japanese manufacturers had opportunities for expansion which are without parallel in industrial history, but failed to make the most of them. Complaints arose on all sides that, although the first shipments ordered were fairly up to the samples shown, succeeding shipments were below this quality. Indian importers

complained that they had endless trouble owing to failure to answer business letters and general unbusinesslike methods. As a result, Japanese traders and their wares earned a rather unenviable reputation in Indian markets. (1) Japanese statistics showed an immediate decline in the export of goods for which the war created such a demand; this was in part due to the rise in prices in Japan, but still more to the resumption of peace conditions amongst the warring nations. The expansion in industries in Japan was abnormal and unhealthy. In 1919, for example, there were erected 2,700 factories involving a capital of 522,000,000 yen, but depression set in and a great slump in business followed, and many failures ensued. The unbridled speculation and wild company promotion led inevitably to severe reaction. In the single month of June 1920 no less than 134 joint stock companies went into liquidation. (2) The *Japan Weekly Chronicle* for September 23, 1920, had the following: "During the war Japan had an advantage that comes seldom in the lifetime of a nation. She had the opportunity of establishing herself in markets where... her product had not previously been seen. It was badly used. Goods were exported that failed to reach the standard of sample—lamp glasses that broke in being handled; matches that would not strike; shirts with buttons pasted on, and so forth. Of course, it would be absurd to suggest that all Japan's exports during the war were of this calibre, but the tricks of traders and the inferior qualities of goods put on the market were sufficiently numerous to determine her temporary customers to go back to their former suppliers when circumstances permitted. A prejudice was aroused against Japanese goods due to the evil practices of a section of Japanese manufacturers that has done great harm to Japan's commerce."

It is important to secure a proper understanding of the industrial position in Japan as there are exaggerated ideas abroad as to what this is. Some writers speak of Japanese and British industries in the same sentence as if they were at all comparable; and they urge the Indian Government to follow the example of Japan as if the advantage gained were beyond dispute. Japan has made marvellous progress, but she is no more exempt from making mistakes than other countries; and she is as much exempt from the operation of economic laws. The Punjab has its special natural advantages, and it is to the proper development of these that it should look for that wave of prosperity which everyone desires to see. No magician's wand will do what persistent, unceasing, well-directed effort will accomplish. But that effort

(1) Cf. Report on the Conditions and Prospects of British Trade in India, 1919.

(2) See article in the *Pioneer* for August 27th, 1920.

must aim at making the best possible use of the potentialities of the province, and not at a slavish imitation of industries for which it may not be well situated.

The lines of future progress are clearly indicated in the present situation. Of the 640 registered factories in the province, by far the greater number (over 500) are engaged in the ginning, pressing and baling of cotton, others are flour mills, and so on. That is to say, the industries of the province will be based upon her agricultural produce and will be largely engaged in preparing that produce for utilisation in its final form. Of industries independent of agriculture there are stone quarries, salt and coal mines, and oil fields amongst extractive production but the scope here is very limited by natural resources. Hosiery, weaving, dyeing and tanning have a much greater scope for expansion and factories in aluminium, hardware, cutlery should have a good market. The flourishing sports industry and the match factories may be limited by shortage of raw material just as the prosperous Rezin factory may be. These last three suggest a promising line of investigation into the industrial uses to which Punjab forest produce may be put.

If this chapter appear to be written in too gloomy a tone, let it be remembered that it was first designed to meet the demand from certain enthusiasts for government action to an extent which would have left little enterprise to the private individual. That there is a great prospect for industries in the Punjab is clear from the great progress which has been made in the last fifteen years; but most of these are on a small scale, most suited to the markets and attract little attention from the would-be investor. The number of small power industries based upon the oil engine is considerable; they are found, and heard, all over the central Punjab and the colonies, and there is still scope for many more. The number of registered factories is steadily increasing and so also is the quantity of labour employed. A more rapid progress might well be regarded as risking disaster. Along with the increase in the number of power engines at work, there is developing valuable experience in the economics of their working, skill in their management and encouragement from their results, all factors of great promise for the future.

There is great scope for the better organisation of, and perhaps for the employment of power in, the numerous village industries dependent on hand or the bullock and their neglect is one of the less pleasant features of the situation. Whatever theorists may say, the industrialists of the province have realised the truth that agricultural produce provides the key to industrial expansion. Sustained efforts are being made to stimulate chemical industries which require little power, and so long as the beginnings are

sufficiently cautious there appears little reason to fear too many set-backs.

The last fifteen years have brought a greater understanding of the prospects within the Punjab and if the survey be carried back forty or fifty years then there can be little doubt that the future holds out fair opportunities for all. That the Punjab should export hides and import leather goods ought to set many thinking and many ideas could be obtained from studying the nature of the imports into the province. The two lines for future advance are clear : the local demand for manufactured goods and the processes through which agricultural, forest and other produce is put before it reaches the final consumer. A careful study of the limitations described above should provide warning against the failures that will be the certain outcomes of any attempt to force the pace ; a determined concentration on the resources in every line of a great province should point the way to success.

CHAPTER XVI.

AGRICULTURE VERSUS (?) INDUSTRIES.

Agreement as to the need for industries—views of the more extreme advocates—growth of industries in the West and the position in India—Japan—Denmark—England—the desire for industries in India—profits from industries—more wealth from agriculture in the Punjab—dependence of industries on agriculture—for raw material—and for a market—risk of neglecting agriculture.

When the first edition of this book appeared there had been a considerable controversy as to the need in India for great factory industries and the desirability of the State embarking on an extensive policy of assistance to them. The discussion took the form of decrying agriculture as an occupation only fit for stupid people and of upholding industries as productive of the highest moral qualities; coupled with this there had been a definite attempt to spread the fable that India had once been a great industrial country which position she had lost because, so the propagandists alleged, some weavers at Dacca had once had their thumbs cut off. Since then there has been considerable development along industrial lines and the State has accepted a policy of discriminating protection, but the expected moral and intellectual revolution has failed to mature. As there is still among some people a strong belief that industries should be fostered at the expense of agriculture and the agriculturist, and that mere economic considerations should be swept aside when "national" idealism is to be served, it may be worth while to examine the question afresh and to attempt to bring a few facts under analysis. That there is a real need for sound views on the subject is clear from the enormous burden placed upon the people at large in order to afford protection for isolated factories in this province or that. Everyone agrees that industries are desirable in order to improve the economic position of India, to create wealth, to dispel poverty, and above all to diminish the dependence on the monsoon, and there is little disagreement as to the duty of the State to encourage them by all fair means that will not cripple other occupations; but when millowners and others press their claims to the point of bringing distress to India's greatest industry of agriculture then there is a clear need to establish a proper sense of proportion between the claims of the contending parties and to

dispel the misunderstanding deliberately spread by persons interested in one side only.

The Fiscal Commission allowed itself to say that "a country industrially undeveloped tends to suffer from a certain intellectual deadness. The outlets for diversity of talent are few. It is hardly too much to say that a certain measure of industrial life and opportunity is an essential condition for building up a vigorous national character." One professor of economics after another has suggested that to encourage agriculture would be to retard progress while to create industries would develop the intellectual and moral qualities of the people; and more than one has given support to the idea that India was once a great industrial nation with great ship-building and so on. Some take their cue from that remarkable venture into the realms of historical imagination which was embodied as a minority report to the Industrial Commission; and the existence of castes with little or no hereditary connection with agriculture has served to introduce an unfortunate element of bias which advocates the fostering of industries at the expense of agriculture, places industrial progress before agricultural progress and presses for measures in aid of industrial development which would result in serious harm to the chief occupation of the Indian people. A striking example of the last was the placing of a duty on Japanese cloth so heavy that it drove the Japanese from the market for Indian raw cotton, and diminished the price obtainable by the cultivator for his product.

A careful reading of the case presented by the would-be industrialist suggests that he treats with equal contempt agriculture and all small industries associated with it, and visualises only large scale factory industries. There are at the moment very many more people engaged in various industries in India than in any other country of Europe or America; there seem to be more weavers in India than in Lancashire. In no country is the population occupied in manufacturing and extractive industries at all large when compared with the population of British India; if British India had industries as large as Great Britain, employing as many men, probably the total so employed would be less than ten million (including dependants) or about 4 per cent. of the population of 257 millions.

When the early English travellers reached India, the population of the England they knew was but a few millions, and they were astonished at the number of men they found employed in the various hand industries they saw. The fact seems to be that before the West made its sudden leap into the industrial revolution, its industries were not in advance of those in India while in many directions Indian craftsmen were ahead of their European

contemporaries. A small country like England has numerous ports with, at that time, few ships in each ; India is an immensely greater country but has only four good ports and very few others at all, and her shipping is naturally more concentrated. But it is beyond dispute that India never had what in the present day would be called great industries or any great export trade in manufactured goods. On the other hand it appears clear that never has industrial production been higher in India than it is now, while the immense growth of her export trade since railways were introduced is too well-known to stress.

It is true that her exports consist mainly of raw materials while her imports are largely manufactured goods, but the total number of people up and down the world engaged in manufacturing the goods which India imports cannot be great, probably at the most one or two million persons, and if the whole of these imports were made in India the additional employment thus afforded would be almost unnoticeable amidst the huge population of the sub-continent.

The great advance in material wealth in the West was due to certain great inventions and discoveries which showed the way to use the immense deposits of coal and iron existing there.

The continuous growth of industrial activity has been made possible by further incessant inventiveness and mechanical ingenuity and by the facilities for cheap sea transport. In the Punjab coal and iron are not found in rich deposits ; there is no cheap water transport, and the people have as yet not disclosed any great capacity for original inventiveness. Of other provinces of India much the same can be said, the few exceptions being, of course, the centres of industrial activity. The simple fact is that the conditions requisite for large scale successful manufactures are absent from the greater part of the land, and no amount of State aid, fair or unfair, will enable a man to make bricks without clay.

For most great industrial undertakings there is needed cheap power, usually coal, more recently electricity from waterfalls, without this it is useless to dream of great factories and India has accordingly adhered to her old sources, the man and his bullock. The continued existence of innumerable handicrafts, bullock-driven mills and small scale industries is not due to any lack of moral or intellectual qualities but to lack of a better source of power. In Europe the great factories are confined to definite localities determined by the existence of coal, iron or water transport ; even in England, the manufacturing towns are strictly limited to certain areas and the greater proportion of the country is given up to agriculture.

Japan is sometimes looked up to as a model for India to

copy ; yet she is essentially agricultural, over half her population depend on that single occupation. By nature she is not well fitted for cultivation, only a small fraction of her total area is suitable for the plough, the rest is broken rugged country ; yet her people cling tenaciously to the soil and her large scale factories are confined to a few places. In between come a number of small scale industries and handicrafts which occupy the spare time of the people and from which they are not debarred by any caste prejudices. The people are too poor to provide a market for all the goods the factories produce and Japan is faced with the difficult problem of finding consumers for the outturn of the mills she has so sedulously fostered. Whether in the end Japan will be able to maintain her industrial output in the face of accumulating difficulties only the future can tell.

Denmark deserves more study at the hands of Indian economists than she has received ; she is regarded as primarily an agricultural country yet less than 30 per cent. of her people are engaged on the land ; of the remainder a large number are engaged on what are termed agricultural industries, such as dairies, butter and cheese making, slaughter houses, bacon curing, egg grading and marketing. Of large scale factories she has few, yet it is claimed that in Denmark wealth is more evenly divided than in any other country, and further that in terms of welfare of the people Denmark is the richest country in the world.

The United States of America are for the greater part almost entirely agricultural ; the industrial output being markedly confined to the eastern seaboard and the margins of the great lakes and rivers. She affords an outstanding example of the danger to agriculture of allowing selfish urban interests to dominate government policy, for it is now clear that the insistence on high protection for industries has resulted in reducing her largest industry of agriculture to a state of depression bordering on ruin and in bringing her export of agricultural produce to a minimum in which only a few favoured commodities, such as her cotton, can find a place.

In England, agriculture was till recently the largest single industry, many countries are almost entirely confined to toiling for the produce of the land and to preparing this for consumption but only a small fraction of the total population is actually engaged in cultivation and stock breeding. There industrial interests have become paramount ; in the face of keen competition manufacturers seek to reduce costs of production and to this end press for cheap food for the workers. Cheap food is not consistent with agricultural prosperity and, in the struggle between agriculture and industries, agriculture suffers, and the wiser statesmen are seriously alarmed at the conflict in which the purely

selfish interests of the mill worker are killing agriculture.

Thus in the United States the efforts of the manufacturing interests to maintain an export trade against the obstacles imposed by their own high import tariffs have killed the export trade in all except a few agricultural products; in England the demand of the mill workers for cheap food has brought huge imports from abroad to the detriment of the English farmer. In both cases the industrial interests have brought their country's agriculture to the verge of ruin.

The position of India before the War was that she was exporting raw materials of agriculture and was receiving in exchange manufactured products; as her exports increased with the improvement of internal communications and with the enhanced outturn chiefly from the newly colonised lands in the Punjab she was selling more than she was willing to buy in exchange. For generations past, the simple standard of living of the people lagged behind their increasing capacity to buy resulting from the steadily rising prices of their produce and the margin was made up by that continuous steady import of gold and silver which has been such a striking feature of Indian trade figures for as long as they exist. What the total import has been is unknown but six hundred crores of gold within the last sixty or seventy years is an under-estimate; the exact figure is immaterial to the present argument as the chief point is that some of the purchase price of imports was received in a form which was readily convertible into cash. Through other changes, which need not here be discussed, much of this found itself in the hands of the hereditary trading castes, members of which had already accumulated savings through one or other of the many avenues opened out by the introduction of British ideas in law, medicine and other professions or by the rising standard of living which demanded more and better goods of all kinds. Now when a man has accumulated savings he desires to gain therefrom an income which will not reduce the savings; in other words he seeks an investment which will yield a return which he regards as sufficient to encourage him to risk his capital. It is chiefly this large volume of capital seeking investment which gives rise to the desire for industrial development; the owners wish for a return somewhat higher than that obtainable from Government promissory notes and the absence in most provinces of a stock exchange through which they could purchase shares in industrial companies is a serious drawback to the realisation of their ambition. Unfortunately two features hinder progress; although there is ample capital available there is little enterprise and less confidence, while the return expected is higher than that which will attract capital in England. In the interests of the people at large Government must borrow what

it needs in the cheapest market; the net return from public works of all kinds is not great, and where the margin of profit is small the charges for interest may make all the difference between gain or loss from a new railway or canal. The total interest charges on railways and canals run into crores, and it would be unfair to the general taxpayer to adopt a policy which would leave these charges any higher than purely financial considerations render necessary. India can still borrow in England at a rate less than that which will attract investments in India itself and there is no tendency amongst her capitalists to acquire Indian loans on the English market.

Apart from the existence of large sums of capital seeking investment, the need for some diversity of occupations has long been recognised. The number of people dependent on the soil is too great; most of them are under-employed and there is little remunerative work open to them which is not objected to on religious grounds. Moreover, it is obviously to India's benefit that wherever possible she should sell her materials not in the raw state but "processed" as far as is compatible with the retention of a market. It is better, for instance, for the Punjab that she should sell not raw cotton but cotton ginned, baled and pressed; that she should sell vegetable oils rather than oil-seeds, flour rather than wheat, but it is sometimes easier to find a market for the raw produce than for the partly manufactured article; at present, for instance, while the Punjab finds ready buyers for oil-seeds she has not yet found a market for vegetable oil. The market dominates the position.

There is no disagreement as to the desirability of encouraging industries to find an outlet for the capital already accumulated, to provide employment for the surplus labour on the land and to secure for the province the profits of processing her raw materials. But unfortunately there is an idea abroad that the prosperity of the province should be sought along industrial lines rather than by the improvement of agriculture and this idea if adopted by government as a policy can only result in incalculable harm to the chief occupation of the people and the main source of the new wealth produced in the province.

The idea seems to have its roots in two beliefs: one that the returns from industries will be higher than those derivable from agriculture and the other that agriculture does not offer scope for brains and education.

There is undoubtedly a general idea that industries yield high profits; it is true that some favoured ones do, but these are generally concerned with the exploitation of some new patent or of some temporary monopoly. The discovery of the processes by which wood fibre can be made into a fabric known as artificial

silk has brought large profits to some fortunate shareholders, and the temporary monopoly which the Patents Acts give to new inventions makes possible large profits to others. But the general return from all industrial undertakings is only about two to three per cent. above that obtained from government paper; and if capital lost in failures be reckoned then the return from all capital invested in industrial ventures would be little more than what the State gives on its borrowings.

The large profits attract attention; the money sunk in failures is lost sight of while the numerous cases in which manufacturing companies just manage to pay a small return on their shares are ignored. The simple fact is that if any advocate of industries-at-any-price were given one million pounds to invest, his profits after ten years would be found to represent a very small percentage on the sum invested. The skilled financier would obtain a greater profit owing to his skill, the ignorant would lose much of his original stock; the great outstanding fact is that there are in England to-day many millions of pounds awaiting opportunity for investment, and that large sums would readily flow into any enterprise which promised a safe one or two per cent. over the rate on government paper.

Whether, given a surplus population, it would be better to place them on land in the Punjab colonies or attempt to engage them in industries is not easy to decide. In a highly organised industry where there is a large amount of capital per worker employed under skilled direction, the earnings per worker are higher than in unorganised agriculture; but there is no question that most factory employees in the Punjab would prefer to cultivate land if this were made available. Indeed, even where industries are more widespread than in the Punjab there is great complaint of shortage of labour. What would be the earnings per man employed on a large farm, highly capitalised and skilfully supervised, is difficult to assess, but the British Cotton Growing Association have shown that such earnings would be high; and there is ample scope in the province for increasing the earnings of the man on the soil.

It is not possible to assist in the solution of the question by giving definite figures for average production per person employed. In England, before the war, it was estimated that the average annual production was £90 per person engaged in agriculture and £104 per person engaged in other industries.(1) In a moderately well organized industry, represented by the Bombay Cotton Mills, the average production per person employed is Rs. 1,115. In all India the average is Rs. 912; but these figures include the

(1) Ashby : Position of the Rural Worker in Industry, p. 77.

value of the raw material. In Indian coal mines the average production seems to be as low as Rs. 415 per person employed; in woollen weaving, owing to the high cost of wool, the average production is Rs. 2,300. The average gross earnings per person employed in Indian railways is Rs. 1,180. It is impossible to give any accurate figures for cultivators, but the average annual production in the Punjab may be taken as somewhere between Rs. 350 and Rs. 650. If it were possible from the information available to calculate the additional wealth produced by the labour of the person employed in agriculture and in industries, it is probable that the balance would be in favour of agriculture. If the agriculture of the province were organized and placed under as skilled direction as is the cotton weaving industry of Bombay or even as are some of the large colony grants, any doubt as to which side the balance lay would disappear. It must be assumed that the average worker in the Bombay mills is producing as much as he can under the conditions that exist, that no unnecessary surplus labour is employed, and that he is employing as much power and capital as he can with profit. These conditions do not exist in Punjab agriculture. There is, as has been seen, an excessive amount of labour for the work to be done, the power used seems to be below what is required and very little capital is employed. Were even the methods of cultivation of all raised to the level of the best to be found in the province, there would be a great enhancement of the yield. (1) But even the best methods now in use fall far short of the most profitable methods known. In discussing the relative advantages of developing industries and developing agriculture, it is important to remember that, in discussing industries, probabilities only are being dealt with; while in agriculture the stage of practical certainties is being rapidly approached. By this it is not meant to imply that the raw cotton, for instance, produced in the Punjab cannot be spun and woven within the province. That is a simple problem, a matter only of imitating what is being regularly done elsewhere.

(1) This is certainly true of the Punjab. It is also asserted of England, cf. *State Help for Agriculture*, p. 28:—The value of the produce of one farm would often be double that of another in the same district—due solely to superior management and the employment of ample capital. The Dewan of Mysore addressing the State Economic Conference in June 1920 said:—The value of the crop produced on one acre of dry land in the State is about Rs. 15 and of wet land Rs. 30—comparing even within the State, the average yield of crops on the same class of land under the best methods of cultivation prevailing in the State is three to six times as great as under ordinary methods. The profits from agriculture alone could be easily doubled almost immediately even though the people follow their old established methods but pursue their occupations with greater intelligence and have more facilities to obtain capital.

In cases where a tenant is able to lease a fairly large area of land, as in Mianwali, his annual produce may be worth Rs. 1,000 to Rs. 1,200. A trained agriculturist with capital could produce more.

But it is easier to repeat the processes of manufacture than it is to repeat the conditions of successful manufacture, a difference which is not always borne in mind. The former is a simple question of technical ability, the latter is a question of economic profit involving all the difficulties of marketing. No one would assert that the existing hand industries of the province, such as weaving, tanning, iron work, bring much profit to anyone. The attempts to introduce weaving under factory conditions have not proved unvaryingly successful. The mere imitation of a well organized industry is easy and what is easy is seldom very profitable. The Railway workshops owe their success largely to an assured market ; the Jallo Resin Factory has a practical monopoly of raw material ; this or that other factory is successful because it can supply fully the local demand and hence there is no room for a rival. But the Dhariwal Woollen Mills live on the merits of their goods and supply an instance of what can be done under highly skilled management that suggests that success is not impossible in other directions. But considerable progress in agriculture seems to be attainable with less risk. Mr. Milne put out for general cultivation his famous 4 F. cotton about 1914 ; this has been followed by other strains, both American and local (*desi*) and now great areas are under the new selections of seeds. In 1919-20, the acreage was 525,000 acres, in 1931 this had increased to 14,50,000 acres of which 850,000 were under long staple varieties. The additional wealth brought into the province every year from this one source runs into several crores. The selections of wheat put out by the Agricultural Department were sown on nearly 400,000 acres in 1919 ; by 1931 this acreage had increased to two and a half million, and additional yield obtained from the selected seed over a similar area under the old types was estimated at 5,00,000 maunds.

The Coimbatore sugarcane have revolutionised the outlook for sugar with their greatly enhanced yields, and already cover about a quarter of the total area (about 425,000 acres) under cane in the province. The new canes have encouraged the cultivators to put more land under this valuable crop and the future prospects seem unusually bright. In many other directions appreciable progress is being made,—rice, gram, fodders and so on—while the Punjab's natural aptitude for fruit growing is being enthusiastically exploited. That there is now a great annual additional income accruing from the results of research and investigation is beyond all question, and the work is as yet in its infancy. In the stockbreeding side too, the potentialities are being explored with gratifying results, and it is clear that the province could have a flourishing dairy industry if certain prejudices could be overcome.

In another direction a great increase of the annual income could be obtained by the adoption of improved methods of cultivation and better implements. Some of the large grantees have shown the way to profitable changes and in the colonies particularly there seems to be a willingness to adopt advice.

To those who are inclined to doubt the future possibilities for agricultural progress the author would offer the suggestion of estimating the enormous gain that would result if only the millions of small holders would change the bullock plough for the spade in cultivation. In Europe, people trying to live on $2\frac{1}{2}$ acres and less do not plough nor do they waste their resources on keeping animals for power; they dig and for the intensive cultivation which should be the characteristic of these people the spade would effect a revolution.

A truth that is frequently overlooked is that goods produced need not pass into trade in order to add to the wealth of the people; any improvement in the diet of the people that may result from growing a greater variety of fruits, vegetables, and other commodities on their own fields adds to the welfare of the province, and the lot of the small holder may be greatly improved by the more enlightened use of his tiny plots of land.

In other directions also the prospect is encouraging; new irrigation projects are under construction or contemplation; tube-wells have proved their worth in a limited sphere, boring of old wells is now an established practice, the appalling burden imposed by fragmentation of holdings is being removed by consolidation, the interest of the people is being aroused by successful efforts to reduce debt and by the spread of the co-operative movement, and in many ways there is coming over the main occupation of the province a new spirit of hope and enterprise, a belief that better conditions can be earned by personal effort, and a determination to earn them. The annual accretion of new wealth from the land can be doubled if the people so will, and it is this prospect of increased earnings from agriculture that offers the best prospect for industries.

Education is spreading and ideas are seeping into the minds of all; co-operative organisation is gaining ground; the results of research into local agricultural conditions are becoming widely known and appreciated and there has in recent years been a clear awakening to the position which agriculture ought to occupy in the activities of both government and people.

If only the obstacles to progress being imposed at the behest of certain mill interests can be avoided, there should be a marked expansion of trade, commerce and of all the industries subsidiary to agriculture.

In trying to envisage the future of agriculture it would be a

mistake to confine consideration to what has already been achieved. Research in Indian agriculture is as yet in its infancy; progress is hampered by seasonal limitations and local conditions; the caprice of the weather is such a large factor in this province that experiments have to be carried on through long series of years before definite advice can be given with confidence. The workers are few; reliable records of past experience are scanty; the scientific side of the university is hardly yet sufficiently developed to accord that aid in pure science which is invaluable to the technical investigator. What has been gained in the past seems to be as nothing compared with the promise held forth by the future. It is such considerations as these which suggest that the prosperity of the province will in all probability be better sought in the development of agriculture and of the many industries attending on its needs or drawing their material from its produce, than in any attempt to follow slavishly the example of Japan and set up large factories on the European model.

No one could desire to see repeated in the Punjab the miseries that attended the introduction of factory organization in England, nor the doss houses of Japan or even the chawls of Bombay.(1) The many problems of sociology, and hygiene created by factory conditions have not yet been solved even in England. Injury to health, weak physique and crabbed outlook may not be inevitable but they are almost universal accompaniments. Those who argue that the development of great industries will bring in its train moral and intellectual progress and a strengthening of national character should ponder on the facts of industrial life as found by the Royal Commission on Labour in India : (2)

“The establishment of industry in the average Indian town has, in certain respects, not always been an unmixed blessing. Whilst stimulating trade and increasing the rateable value, it has added to the population large numbers which are a constant menace to the health of the community and frequently necessitate heavy expenditure owing to outbreaks of epidemic disease. From the last census report it appears that 70 per cent. of the houses in Bombay city are one-roomed, and the Labour Office family budget investigation of 1921-22 showed that 97 per cent. of the working classes were accommodated in one-roomed tenements with as many as 6 to 9 persons living in one room. In Karachi almost one-third of the whole population is crowded at the rate of 6 to 9 persons in a room, whilst in Ahmedabad 73 per cent. of the working classes

(1) See Prof. Kale's *Indian Economics*, 3rd Edition, para. 60, etc., for an interesting view of Indian opinion.

(2) Report of the Royal Commission on Labour in India, p. 270.

live in one-roomed tenements. Corresponding figures for other cities such as Cawnpore, Howrah, Calcutta and Madras are unobtainable, but our observation showed that nearly all the workers live in single rooms. In the busiest centres the houses are built close together, eave touching eave, and frequently back to back in order to make use of all the available space. Indeed, space is so valuable that, in place of streets and roads, narrow winding lanes provide the only approach to the houses. Neglect of space is often evidenced by heaps of rotten garbage and pools of sewage, whilst the absence of latrines enhances the general pollution of air and soil. Houses, many without plinths, windows and adequate ventilation, usually consist of a single room, the only opening being a doorway often too low to enter without stooping. In order to secure some privacy old kerosene tins and gunny bags are used to form screens which further restrict the entrance of light and air."

Moreover large scale factories are not essential to prosperity or to the accumulation of wealth ; Denmark is the classic instance and another is furnished by a large part of France. She affords, says Professor Marshall, the most important instance of a great industrial country, whose people are not inclined to the methods of massive production. The great economic solidarity of the French family fosters a disinclination to the steady and unyielding routine of the factory. ... The wealth of France has been due to the individuality, artistic tastes and skill in fine work of her people, whereas England has derived hers from her leadership in the arts and resources of routine mechanical manufacture. (1)

If it be assumed that the popular vote has gone against the argument here set forth, and that continuous sustained efforts are initiated to encourage industries, there will still remain the need for a corresponding development of agriculture for as the urban factory population increases the demand for food will increase too. For the industrial population food will have to be grown in greater quantity than at present, and as the new industries bring new wealth to the people, their requirements will grow. Situated as the Punjab is, it is unlikely that her population could be fed upon imported foodstuffs and it is beyond all practicable possibility that the huge population of India could in any considerable proportion be fed from imports. It must be remembered that the definite acceptance of the policy of State participation in industrial development and of State aid thereto is not confined to this province, but is to be the feature of future activities in other provinces too; so that there is little likelihood of surplus foodstuffs being available from neighbouring tracts to meet any future

(1) Industry and Trade, Book I, Chapter VI.

unless agr: are producing above their
requirement so agr: progress should
be made ind: progress³³⁸. Both are
complementary.

deficit here. The distance of the Punjab from the seaboard would serve to prohibit import from overseas for many years to come. Thus, whatever may be the result of the new movement toward industrial development, there must be a great improvement in agricultural methods and production. In other words, the development of industries on a large scale is dependent on such a development of agriculture as will at least suffice to feed the increasing urban population. The apparent antagonism between the two great occupations is thus unreal. It would be a short-sighted policy to concentrate attention on the one to the neglect of the other while to encourage industries at the cost of the agriculturist, as seems to be the present policy of the Government of India, can only lead to disaster.

Of the many fallacies contained in the dissenting note to the Report of the Indian Industrial Commission, one of the most remarkable is that, owing to political action by one nation, there has resulted a great decline in Indian industries which has, in turn, led to frequent famine. With a given population, the greater the proportion engaged in agriculture the greater would be the amount of food produced; and the greater the proportion engaged in industries the amount of food produced would be so much less. There can never be a large industrial population unless agriculturists are producing a large excess of foodstuffs above their own requirements or unless food can be imported. It is not in evidence that India was ever a large importer of foodstuffs; and accordingly the country must have been dependent on its own resources. Thus the existence of a large industrial population would have accentuated the evils of a failure of the monsoon, not have mitigated them. For the same reason those who argue that in a normal year India does not produce enough food for the full requirements of her own population should advocate not industries, but agriculture. The development of industries will tend to an increase of population and to feed this increased number of mouths there must be more food produced.

But there is much more than the mere question of food for workers. If industries are to spring up they will require raw material. The carriage of this over long distance by rail will be prohibitive; so that it may be accepted that the industries of the future will be engaged with the raw material which the province produces. That is to say the soil of the province will be the source whence its industries take origin. Further, as the cultivators and their subsidiary workers number over 80 per cent. of the population, they provide the market on which manufacturers will chiefly depend; and as the greater the prosperity of agriculture the greater will be the purchasing power, manufacturers ought to be the most sincere well wishers of agricultural progress.

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Different industries come and go with changes in taste, fashion and inventions but agriculture always remains and a prosperous agriculture will always be the main factor in the economic stability of the Punjab. It is possible to have a flourishing countryside without large scale factories, but, in the Punjab, there will never be flourishing towns and profitable industries if her agriculture falls back into a stagnant state of cultivation for bare subsistence. Wealth pours from the country to the town and under Punjab conditions towns will not flourish in a desert. Thus, whatever antagonism may have appeared to exist between agriculture and industries, should disappear. If industries are to spring up and flourish in this province, they must be based upon what the soil can produce, and there must be a prolonged, indeed probably unending, investigation into the capacity of the soil to produce material of industrial value. It should not be a question of agriculture *versus* industries, but of the two great occupations expanding side by side, with agriculture always necessarily taking the lead.

If reference be now made to what was said in an earlier chapter on the effects of the geographical position, it will be seen that the line of future investigation must be toward the discovering of those articles for the production of which the province is best suited or possesses some advantage over possible rivals. Sentiment, in such a matter, will have to give place to Nature. If other people adhere to science and economic laws, while the Punjabis allow sentiment to rule, there can only be one end to the competition. It is now clear that a close study of rural economics is as essential to the firm foundation of an industrial era as to agricultural prosperity. The cultivator must be educated to appreciate all the possibilities of his calling, for amongst those possibilities is the inception of great industries. The intelligentsia of the province must look to rapid progress in agriculture for the raw material and the market for those factories they hope to direct. The potentialities, the problems, the special features of the Punjab must be closely studied. Its history, in so far as it explains the present position, must be carefully elucidated, and the correct lessons drawn for future guidance. The ground must be thoroughly prepared if the present policy of State encouragement of industries is to bear lasting fruit. Without these, there can only be further failures, losses and disappointments. The hope of the people is that great and rapid strides will be made, so that the time lost in the centuries of invasions and internal disturbances shall be recovered. To achieve this at all successfully, accurate knowledge and disciplined reasoning will be essential.

CHAPTER XVII.

THE PLACE OF CO-OPERATION IN A MODERN STATE.

Revolution in agriculture in Europe—co-operation—the American Commission—effects of the world war—co-operative distribution—need for organisation in agriculture—now generally recognised—the difficulties of Punjab agriculture—the need for encouragement of greater effort—alternatives to co-operative credit—Dawsons Mortgage Bank—the big English Banks—position in the Punjab—the future.

It is, perhaps, unfortunate for India that, England being largely an industrial country, the British officials brought with them the idea of co-operation prevalent in the manufacturing centres, namely, the co-operative store for distribution of household requirements. Of co-operation as a panacea for rural ills little seems to have been known in England until towards the close of the last century. It is true that much of the preliminary work of trial, failure and success was carried out by British workers, and that the idea which has since been adopted throughout the civilised world was first evolved there; but of co-operation for farmers as a method of organisation few writers showed much knowledge. The system of land tenure in the British Isles, of large benevolent landlords engaged with the administration of the land and of tenants on a yearly lease exploiting their skill to the full in the confidence that they will not thereby be risking the penalty of increasing rents, was not calculated to show the need for co-operative effort. Where the landlord provided all the fixed capital required for buildings and improvements, the tenant was able to reserve his slender resources for stock, implements, manures, etc., and as he could not pledge his land as credit he learned to do without it to a large extent. Moreover, an English farm is a large concern of 100 to 500 or more acres; the farmers are for the most part men of substance with credit at the bank, and the banks were the old country type that regarded their interests as bound up with the prosperity of the farmers of the locality, and prided themselves on supplying deserving clients with every suitable accommodation that could prudently be given on business lines. Where there was hesitation in asking credit from the local bank, the dealer in implements or manures would grant it. On the Western continent, where peasant proprietorship largely prevails conditions were widely different.

The small holder had no landlord behind him to share the brunt of bad seasons or low prices; the period of agricultural depression that came over Europe in the middle and second half of the last century found him without reserve to meet the crisis; tied to the land, he was left to face poverty and distress in the sole company of the money-lender. The great slump in real property that followed on the advent of cheap American wheat curtailed what little credit he had, and there ensued the black period from which agriculture was finally rescued by the development of co-operation and the discoveries of Liebig and his followers.

The second half of the last century witnessed a revolution in methods, and indeed in the whole economy of agriculture. Among the changes perhaps none was so pregnant for good as the introduction of the co-operative principle into agricultural organisation. From 1870 till the end of the century the new movement spread in many districts, but there was little notice taken in England until Sir Horace Plunkett's campaign in Ireland began to attract attention. The next stimulus came from America, where President Roosevelt started his Country Life Movement; one step taken in this was to send a commission, composed of representatives of all the chief States and certain non-official members, to tour Europe and study co-operation on the spot. With this commission Canada sent representatives of her own. As a preliminary measure, all Embassies of the United States in Europe were directed to collect material descriptive of the movement in the various countries, and this material was collated by the late Mr. Herrick, at that time the distinguished Ambassador to France. The commission recorded evidence in Europe and gathered other evidence on rural conditions in America through small committees appointed in each State. The result was an examination of European co-operation by impartial Americans, who brought to their study fresh minds unaffected by the numerous local controversies; some of the conclusions are to be found in the official reports, others of great value are recorded in books written by several members of the joint commission. The analysis of European systems thus carried out has been of the utmost value to agriculture. It established the principle of co-operation as the one essential method of organisation necessary to make small holdings a success, and as most likely to enable large holdings to continue profitably. It raised the village credit society to its proper position in rural finance; it put almost beyond the range of discussion the generalisation that co-operative sale was the only really satisfactory method of disposing of produce.

Previous to this the literature in English on the subject was almost confined to Mr. Wolff's books and special reports such as

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the very valuable one by Sir F. A. Nicholson of Madras ; and the early pioneers of the movement in India had little opportunity of learning what was being done in other countries.

Such was the position in 1913. In ordinary times it is probable that these conclusions would have struggled for acceptance for several generations, but the course of the war brought into a prominence that could not be ignored the idea that every country should depend more upon itself for its food supplies. Agriculture bounded to the forefront as the one essential industry for war, as well as for peace. In every country there was almost feverish activity in introducing measures designed to promote the formation of all kinds of agricultural co-operative societies, and since the peace these societies have been entrusted with the reconstruction of agriculture and of rural industries in the regions most seriously affected by the operations of war. The continent of Europe has looked to co-operation as the means of encouraging the revival of an industry which had been eclipsed by the development of manufactures in the previous fifty years (1).

The American Commission soon realised that the question that confronted them was at once larger and more intricate than the problem of procuring cheap money for farmers. At an early stage in their investigations the conviction was borne in upon them that they were concerned in a question no less fundamental than the entire problem of rural life. The application of the co-operative principle, to agricultural production, they found, has contributed not only to the economic improvement of the farms and the conservation of agricultural resources, but also to the educational development of the individual and the progress and integration of rural society. Agriculture, the first industry to be learned, was the last to be developed. (2)

More recently there has been in England an Agricultural Tribunal of Investigation, including leading economists, and their verdict is clear: Our study of foreign countries has impressed us with the large place occupied, both in the old countries of Europe and in the great new States overseas, by methods of co-operation among farmers and by agricultural education. Foreign experience shows that co-operation is a natural basis of social and educational development in agriculture. State assistance to agriculture is more effective and economical where the agricultural community is co-operatively organised

(1) In 1920 Mr. M. L. Darling, I.C.S., and Mr. C. F. Strickland, I.C.S., both of whom had served as Deputy Registrars in the Punjab, spent some months on deputation in European countries studying the movement. Their reports show the present position of co-operation after the war.

(2) The quotation is from the Saskatchewan Report, p. 13.

than where it remains in a condition of dominant individualism and if for no other reason, the State would be justified in assisting the growth of agricultural co-operation by which it will be enabled the more effectively to promote its educational and other services. We do not hesitate to state that the comparative failure as yet to achieve a widespread co-operative system is one of the contributing causes of the depression of British agriculture. Co-operation is a natural basis of social and educational development in agriculture, and agriculture in this country stands in great need of such development. The State itself is interested in the extension of co-operative methods in agriculture.

The great benefits to be derived from co-operation are admitted by all who have made a close study of the subject, but appreciation of an achievement is easier to secure than the achievement itself. For the latter, there are required leaders with a knowledge of what is necessary to be done, and with the unselfishness and the capacity to devote themselves to successful constructive work. Now the cultivator seldom thinks for himself. As a class he is little apt to lead, and has seldom produced the pioneer of a new movement affecting even his own interests. It is a remarkable fact that the leader of a successful co-operative movement has practically never sprung from amongst the cultivating class. The original organiser in each country has usually been some one man, or set of men, not engaged in agriculture. (1)

The intelligent youths from the country are led, by the circumstances of their education, to seek their careers in the towns, and it is from the towns that have come the leaders with the intelligence to grasp the essential needs of the rural community and the determination to construct the organisation required to satisfy them. Thus, whether the type of co-operation under consideration be urban or rural, the stimulus has generally come from the town. The townsman must be encouraged to take an active interest in the problems of the country. (2)

The first successful co-operators combined elementary business ability with great faith in the social benefits to be

(1) Cf. Smith Gordon: *Co-operation for Farmers*, p. 57.

Also Cf. Herrick, p. 456. Denmark is an exception. The co-operative movement in Danish agriculture was not started by a circle of philanthropists, or even by the landlords, for the purpose of benefiting the practical farmers. It has grown up locally and gradually among the peasants in the villages, and takes its root in the feeling of solidarity and a sense of the benefits of mutual help among the peasants which can be traced back to remote centuries. The date of the foundation of the agricultural co-operative movement in Denmark cannot therefore be given as it can in some countries where it owes its inception to the action of a single man or of a committee. Faber: *Co-operation in Danish Agriculture*, p. IX. The attempt in 1866 by philanthropists to introduce the Rochdale type of Co-operative Store into the towns was not a success.

(2) Cf. *Rural Life Problems of the United States of America*, p. 151.

derived from their business. They were working men, possessed of little education, but endowed with sound intuition. They realised that the most wasteful and ill-managed business of the country was that of marketing goods to the working classes, that, if they could devise a means whereby these classes could secure better food at cheaper rates, they would be making a great stride towards the amelioration of the conditions under which they lived. On to a comparatively simple business proposition they grafted a great social ideal, the supplanting of soulless competition, by more humane co-operation. Of the progress of this movement this is not the place to write; it will suffice to record that the original society of Rochdale Equitable Pioneers, founded in 1844, has grown into a huge movement over the whole British Isles.

The idealism of the Rochdale Pioneers that carried them through all their difficulties has been repeated in other countries and in other phases of the movement. It is when the peasant proprietor is suffering distress that he seeks a remedy in the reorganisation of his industry on co-operative lines, and it has usually been only acute poverty that has weakened his strong disinclination to share his secrets with his fellows.

Whether co-operation has definite limits to expansion need not be discussed here. In its organisation, management by a committee is an essential feature and this is not suitable for many lines of business, nor are its members usually drawn from the ranks of great businessmen. (1) The reasons for its success have been studied and several of its principles adopted by its rivals and it would seem that co-operative supply will generally be confined to staple goods in general demand.

So far then as co-operative distribution is concerned, there appears to be a fairly well-defined limit to its expansion; this limit is fixed by the extreme specialisation of modern business and the difficulty of finding leaders of the requisite qualifications willing to accept duties in a co-operative organisation. From this it must not be concluded that town co-operation has been a failure; it has achieved vast results, both moral and economic, in ameliorating the conditions under which the working classes live, and there is a field in India that will provide scope for all the unselfishness and enthusiasm that this or the next generation is likely to see. It will probably remain as the only protection of the poor against the less scrupulous middleman and profiteer and continue to offer the best prospects of escape from economic servitude.

Apart from distribution, urban co-operation has achieved

(1) For a broad view from which I have freely quoted see Prof. Alfred Marshall's *Industry and Trade*, Book II, Chapter VII.

much in providing sound credit to small tradesmen and craftsmen in Italy and elsewhere through the medium of People's Banks.

In India there is undoubtedly great scope for such institutions and considerable success has been achieved in several provinces, notably Bombay and Madras and on a more modest scale in the Punjab. The small shopkeeper, the handicraftsman and the petty dealer all suffer from the lack of a sound system of controlled credit and so slip under the control of usurious middlemen. There is a great field in the Punjab towns for public-spirited men who are willing to sacrifice part of their time to help their poorer fellows.

But the achievements of the urban co-operative bank have been overshadowed by the immensely greater results won in the village. Organisation is the keystone of most success. So long as the farmer sought to supply only his own needs, he felt but little the need of any form of combination, but, with the improvement of communications and the consequent opening up of markets, he became subject to the attentions of traders who sought to take as much and give as little as possible. When all around are organising to secure greater profits for themselves, the farmer must organise or go under. The organisation may be imposed upon him from without, as by some middleman such as the village shopkeeper who seeks only his own immediate gain, or it may arise from within, that is to say, from amongst the farmers themselves. It would appear that the earlier forms of organisation invariably came from without and that the greed of the middleman has ever been a powerful stimulus to induce the farmers to agree to form an organisation of their own. (1) As the largest and most important industry, as well as the source of nearly all commerce, agriculture must be organised. But the peculiar conditions attendant upon its pursuit make this unusually difficult. The industry is carried on by a very large number of comparatively small capitalists, who in the aggregate control a vast amount of capital. The farmer has to be both capitalist and labourer, as well as a technical expert, and few are able to specialise in all three. As soon as he begins to grow things for sale he must learn how to market them to the best advantage or he will inevitably come off a poor second in the competition that he will find at the place of sale.

He cannot adopt the ordinary forms of organisation suitable

(1) Cf. Todd, pp. 1—3.

Also Cf. Bubnoff : *Co-operation in Russia*, p. 37. The elimination of the middleman who pockets a large profit to which he has no right provides the ideal which inspires the co-operative movement, whose cry is : "Down with the middlemen!" "The agricultural societies are, perhaps, an exception in this respect, but in all the other co-operative societies the desire to get rid of the middleman is the basis of the movement." This is rather an extreme view.

for other manufacturing industries ; his is an industry of small units ; his land is not capable of being moved or concentrated ; there can therefore be no association of the greater part of the capital used, there can be only an association of the persons carrying on the industry. When an inventor desires to place his discovery on the market he seeks to secure the necessary capital from the subscriptions of a number of people who join to form a company and these in turn elect directors who proceed to build a factory to manufacture the invention. This is quite unsuitable to agriculture wherein a large number of small men need credit to carry them from sowing time to harvest. The difficulties involved in discovering a satisfactory method for the peculiar needs of the cultivator have been faced in every civilised country and there is almost universal agreement that the solution lies in organisation, not on joint-stock lines but on what are now known as co-operative principles. Unfortunately for agriculture it lacks the glamour that surrounds successful industry and the enormous growth of factory industries in the last hundred years has diverted people's mind away from its possibilities. Although in industry only a minute few of those engaged rise to wealth while many suffer failure, the success of the former distracts attention from the latter and sense of proportions is lost. Now it is true that there are probably few fortunes made in agriculture ; it is not a business that lends itself readily to the amassing of large profits through speculative undertakings. It provides a better living for a greater number of persons than any other occupation but, as at present managed, it possesses little attraction for men of high spirit and enterprise ; there is a tendency in almost every country for the less vigorous, the less capable and the less enterprising youths to be left on the farms ; there is a sort of idea that any fool can be a farmer, that all that is required for those who cannot find employment in industry is a few acres of land ; most people seem to hold the belief that they could make a success of farming if they had the opportunity, and few realise that to be a thoroughly equipped scientific farmer probably requires a higher education, certainly a more complete scientific education, than any of the learned professions, with the possible exception of medicine. Under these circumstances it is small wonder that agriculture has been neglected ; the farmer has been the forgotten man and, until comparatively recent times, he has attracted little or no interest from Government or the rest of the people.(1)

Agriculture is still largely an unorganised industry. It is still distracted by the need of producing the necessities of the

(1) Cf. *Principles of Rural Economics*, Carver, p. 200. *State Help for Agriculture*, p. 49. *Rural Reconstruction in Ireland*, p. 261.
Also Cf. Smith Gordon: *Co-operation for Farmers*, p. 231.

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cultivator, instead of concentrating on those crops that will bring the best return in the market, a return that will enable him to secure these necessities by purchase. (1) If every manufacturing concern were to waste time turning out goods of the quality and quantity required for the labourers engaged, before producing for sale, a severe handicap would be imposed on its prospects of success, and yet, amongst farmers, this is the almost invariable custom. It is only recently that recognition has been found for the principle that it is little use improving the technical efficiency of farmers if they cannot market to the best advantage. They have to produce independently from the very nature of their calling, but there is no necessity to handicap themselves further by buying and selling independently. The old-type farmer always bought in the dearest market and sold in the cheapest; hence, perhaps, the prevalent idea that there are greater profits to be made from other industries than from farming. Now, however, the application of the co-operative principle to the business side of agriculture has changed all that. To the uninitiated it is difficult to bring home the simple fact that in practically every civilised country in the world co-operative credit, co-operative purchase of requirements such as implements and manures and co-operative sale of produce are spreading rapidly everywhere with State encouragement and generally with State aid. By forming associations with his fellows the farmer is able to secure expert guidance and control over the commercial side of his work and to give more time to his special calling of farming.

no use improving technical efficiency if they cannot market it?

Agriculture has become a business, and the farmer must become a businessman. More and more, as he tends to produce only those crops for which his land is best suited, he ceases to live directly upon the products of his farm and begins to live on the profits of farming; he becomes more and more dependent upon markets and market conditions; he must have available the most approved means of handling and marketing, as well as of raising his goods. (2)

Independently he cannot do this with any hope of success, he must adopt the prevailing measures by which alone any large industry can withstand the strain of competition. He must organise; as he cannot combine his capital with that of his neighbours, he must combine himself with them, and this is what is meant by agricultural co-operation. For agriculture to be

(1) Cf. Orwin. *Place of Agriculture in Industry*.

(2) *Rural Wealth and Welfare*, p. 18. Carver, p. 16, See also Nourse, p. 10. Agriculture aims not at bigger corn and fatter hogs as such, but at larger financial net returns....the hope of both the farmer and his friends has come to be placed more and more upon a broader and deeper understanding of the price relationships involved in the carrying on of our commercialised business of farming.

successful co-operation is essential. Throughout the world this truth has been recognised by thinking men, and is being pressed upon the attention of all concerned. Cultivators can no longer ask themselves "Shall we co-operate?" but "When shall we begin to co-operate?" For India this truth is of urgent importance. As Sir John Strachey said so long ago as 1873: "The whole present and future prosperity of this country, and the future financial position of our Empire in India, depended on the development of the vast, and practically unlimited, though too often neglected, resources of the country. If advantage were taken of the means which science and wealth had placed at our disposal for the improvement of the land, and if we abstained from putting into operation theories which ignored the only really great and progressive source of wealth which India possessed, it might be safely predicted that the increase of agricultural prosperity in India would be rapid and immense."

It has to be remembered to the credit of the British Government of the nineteenth century in India that it recognised the principle that it was the duty of the State to make use of its resources in encouraging and developing agricultural improvement. It accepted many of the duties of a good landlord for the improvement of land and advancement of agriculture (1), and it has now definitely accepted the principle that for the permanent amelioration of the conditions of the mass of the rural population the spirit of co-operation must be developed, the principles of co-operation must be explained and the organisation of agriculture on co-operative lines must be spread throughout the length and breadth of the land. (2)

From the above it will, it is hoped, be clear that if a country, dependent on agriculture, is to aim at increasing prosperity, it must be organised on co-operative lines. It certainly seems to be true that all attempts of farmers to combine on other principles have invariably ended in failure. But it is sometimes urged that the spread of the co-operative organisation will throw out of employment many people who now perform some of the functions which it is the object of co-operative societies to perform, and that the increased wealth of the cultivators will be obtained at the expense of increased poverty for others. The argument deserves passing notice. In India, as in most countries, there are too many

(1) Cf. *Report of the Famine Commission*, 1901. Ray, pp. 42-44.

(2) Cf. Nourse, p. 11: Co-operation is urged as a panacea for all rural ills, not as one particular form of economic organisation, whose effectiveness in operation is determined and limited by the appropriateness of that special type to the given situation.

It is claimed that it is due to the thoroughness of the organisation of agricultural co-operation that Denmark has more wealth per head than any other country in Europe.

middleman trying to eke out a livelihood from the transfer of goods from producer to consumer. One aspect is well put by the Industrial Commission in para. 8 of their Report :—" The export trade from country districts generally suffers from the existence of an undue number of middlemen, who intercept a large share of the profits.... A great number of Indian cultivators are indebted to a class of traders who not only lend money, but lend, purchase and sell grain, and sell such articles as cloth, salt and oil to small consumers. The position of the peasant farmer, with grain, seeds, or cotton to sell, and at the same time heavily indebted to his only possible purchaser effectually prevents him from obtaining a fair market price for his crop. Even where the farmer is not burdened with debt, his business with the dealer is still very often on a per contra basis, his purchases and sales being alike reckoned in cash in the dealers' books, at a rate which is not always known to the customer at the time.

The same complaint is made of cotton-growing in the United States where the small grower seems to have fallen into the clutches of money-lending dealers. Of England, too, it is recorded that its agriculture supports a disproportionate fringe of dealers and middlemen (1); and the farmer receives far too small a share of the price paid by the consumer for his produce, and of India it has been said that, had the agriculture of the district to support only its own producers, it would be sufficient to maintain them at their present number, and larger returns might be obtained from the land by improved cultivation to meet still further increase. But agriculture pays a heavy tax to the sowcar, much of which neither represents expenditure on account of the land nor ever returns to the land (2). In the Punjab a careful estimate suggests that, for every rupee a cultivator pays in land-revenue to Government, another rupee is lost in litigation and three or more are paid in interest to the money-lender. If any doubt the serious effect of this drain, let him calculate the good that might result were all this money devoted to land improvement (3). Anyone who contributes to this loss contributes to the prevailing poverty. In so far as the services rendered are necessary to the community, they will continue to be required. In so far as they gain for the performer excessive rewards, they must be subjected to an organisation that aims at the economic uplift of the people. It is not the performers of necessary services that will be thrown out

(1) Hall : *Agriculture after the War*, p. 14.

(2) Report of the Deccan Ryots Commissions, 1875, see Ray, p. 10.

(3) *Ibid*—Ray pp. 7-8. That their present state of indebtedness prevents the ryots from making efforts to improve the outturn of their land there can be no doubt. They find that the land broken up and the wells dug with borrowed capital yield a profit only to the sowcar. The ryot toils that another may rest and sows that another may reap.

of work ; it is the excessive remuneration that will suffer diminution. The useful middleman will remain, though not, perhaps, with the same power for harm (1).

Of one thing there seems to be little room for reasonable doubt, and that is that, if agriculture is to attract the brain and intelligence and capital that it must attract, if it is to attain its maximum prosperity, it must yield to those who pursue it the full profits of their labour. In questions of improving land or methods of cultivation or popularising crops the importance of securing to the cultivator the higher profits of his enterprise is paramount. When it is objected that the spread of co-operation will lead to unemployment amongst any class of middlemen, the reply must be made that the real test is whether the person threatened is performing functions necessary to the community or not ; if he is, he need not fear the loss of his livelihood, though his gains may be reduced to something nearer to the economic value of the services he performs. In so far as he performs no functions that can be regarded as necessary, he is a source of weakness to the State, and his transfer to other occupations will advance that prosperity which it is assumed everyone desires to see.

There is little reason to fear that absolute unemployment, due to a lack of demand for labour, will become a serious practical problem. The increased prosperity of the main industry will lead to the development of subsidiary industries for those engaged in agriculture from their very numbers constitute the greater part of the home market ; the increased income will lead to increased expenditure on a higher standard of living, or to the greater practice of thrift that will provide capital for yet further enterprises. Under circumstances such as these, trade must improve, transport and distribution must occupy more and more workers, the rising standard of living must create new demands. Wherever more wealth is being produced, there is little likelihood of any serious unemployment.

It is one of the beliefs of those who have made a study of economics that, if there be an economic ill, there must be economic causes, and there will probably be economic remedies. Unfortunately, in India, there is a strong tendency to adopt a view of present conditions that seems to be unduly pessimistic. Writers give expression to views that suggest either that the poverty of

(1) Cf. Marshall, p. 812. A stratum of middleman, which appears at first sight superfluous, often does work which would need about an equal number of men if the stratum were eliminated.

It is probable that the decline of the small village industry in India is largely due to the excessive exactions of the middleman : the weaver can earn enough to keep himself, he cannot also keep in comparative idleness the middleman who makes a big profit out of his yarn and another big profit out of his cloth.

the people is a result of some defect in government, or that it is beyond the reach of remedy and omit to notice that most of the poverty is due to the people themselves, to the lack of the will to gain a better living and to the placid submission to conditions around them. Conditions in this province, when compared with those in other countries in Europe, apart from the few more advanced, do not support anything savouring of pessimism. There is much to be done. There is much leeway to be made good especially in the general outlook of the people on their lives and on the possibilities open to their own effort. But it should be possible for workers in this province to profit from the experience of success and failure in other countries, and to make progress at a greater speed along a road thus marked out, than has been possible in the case of those with less experience to draw upon. It is, for instance, clear that, where agriculture is progressive and prosperous, the State is devoting energy and money to its development, and also to the spread of co-operation. Where agriculture is stagnant, there it will be found that the State leaves innovations to private sloth and neglects the supreme importance of organising the peasantry on co-operative lines. It is not possible to substantiate a broad generalisation like this without entering into an examination of rural conditions in many countries ; but, if there be anyone with the temerity to deny the truth of it, it may fairly be required of him to name any country wherein the conditions do not support it. The evidence is now overwhelming that agriculture requires stimulation from without ; and that, if it is at all to compete with town industries for the intelligence of the nation and for the returns on capital and labour, it must be organised on co-operative lines. In a rural State co-operation must become the framework which holds the whole community together. Applying this to the Punjab, it becomes clear that, if the province has, in the past, contained a large number of people unable to enjoy a fair standard of comfort, this is to a large extent due to the fact that it has not been organised on lines conducive to the steady increase of wealth. In a few years prior to 1920 some 8 per cent. of the cultivators accumulated over one crore of rupees in their little village banks. If all the cultivators could be persuaded to organise themselves to practise thrift even on the limited scale that is at present usual in societies and to set themselves to obtain whatever advantages co-operation can place within their reach, there would, in the course of one generation, be a revolution in the economic conditions of the peasantry. Co-operation may yet work a miracle in the Punjab comparable to that accomplished in Denmark.

In advocating co-operation for the agriculture of the Punjab, the writer has not been unmindful of attempts elsewhere to provide

alternatives, especially in the field of credit. Two instances may be recorded in some detail as they are instructive. The first is the attempt to afford credit to agriculture through a joint-stock company relying chiefly upon mortgage as security by Dawson's Bank Limited, Rangoon, Burma. It is a public company with a paid-up capital of Rs. 6½ lakhs, and as a result of careful working it accumulated a reserve of nearly Rs. 5 lakhs. It began as a private venture by a gentleman seeking investment for sums entrusted to him; he later turned it first into a private and later into a public company. It works under unusually favourable conditions in the delta of the Irrawaddy where crops are regarded as secure, and where land is valuable and easily saleable. By careful management it slowly grew until it organised as many as eight branches and accumulated a working capital of 67 lakhs of rupees. Its chief advantage lay in the willingness of borrowers to pay interest charges as high as 14 to 14½ per cent. on the security of a mortgage of their land; on its deposits it paid roundabout 6 per cent., and as working expenses absorbed 4 per cent. it gained about 4 per cent. profit on its capital out on loan, a margin rather rare in banking circles. It was thus unusually favourably situated. In 1926 it paid a dividend on shares of 14½ per cent. Obviously for success it was essential to find men willing to pay such high interest on such good security; the small owner was no use and of course tenants were not clients.

Repayments were not always up to promise and foreclosures were not uncommon; the bank, however, usually managed to sell the land at a profit to itself. For some years the business continued with success and there was no apparent reason why it should not go on for ever; but the severe depression hit the paddy-grower hard; the price of rice fell and with it the price of land. What had seemed ample security for a loan became too small to cover it. The lands taken over by the bank in default of payments declined in value and the bank's assets dwindled. The result has been disastrous; the money taken on deposit being loaned out on long term mortgage security has not proved easy of recovery, for the borrowers have seen their incomes suffer from the slump. Only the caution with which the management had run the business has saved the bank from bankruptcy, but although there should be no loss to anyone in the end, the business has ceased for the time being.

This is the only case known to the author of a land mortgage bank in British India being run with success on a joint-stock basis; this most difficult form of banking requires very special conditions which the Rangoon bank found ready to hand; the present troubles are in no sense due to defects in management and the severity of the depression could hardly have been foreseen.

It is too early to say whether the bank will be able to resume business when land values rise again.

The second alternative to co-operative credit has been sought by the big English banks. For long-term loans they have agreed to constitute a special bank with a reserve fund provided by government and this is coming to the rescue of a number of farmers who, when prices of land fell after the war, bought in their farms largely with money borrowed at a rate of interest higher than the circumstances warranted. When prices of agricultural produce fell, these farmers found themselves facing ruin as they were unable to meet the instalments on their loans. The special agricultural credit bank has been formed to give them loans on longer terms with smaller instalments and a lower rate of interest. It is too early to say whether the experiment will be successful.

The big English banks in their anxiety to meet the charge that they neglect agriculture seem to have gone almost to the other extreme; they advance more than the private banks they absorbed and accept personal or collateral security from approved farmers, or actually advance on the personal standing of the farmer as known to the branch manager. In one bank 28 per cent. of the borrowers gave no security and another 13 per cent. gave only partial security. In other words 41 per cent. of the farmers who dealt with the bank received credit on the managers' personal knowledge of their character and business. Such business reflects the difficulties of financing farmers and strengthens the case for the creation of credit institutions specifically adapted to provide the funds which cultivators need.

The Royal Commission on Indian Agriculture collected immense volumes of evidence from every province on the conditions under which agriculturists in India struggle for their existence; and it became clear that for the great mass of these people there was no alternative road to economic improvement. The density of the population on the land involves several important consequences: if the people are to rise in the economic scale, they must be taught to use their labour to greater advantage, they must use more capital, they must stop every avenue of waste and every loss from inefficiency. There must be education, technical training, skilled direction, capital and business methods. But it is quite beyond the range of human accomplishment to educate the mass as individuals, to train them as individuals, to direct them as individuals, to capitalise them as individuals and to teach them as individuals to abandon wasteful customs and discard extravagant ceremonies. Success can only be achieved by organizing them to do everything together, education, training, and so on. The rural life of the people must be reconstructed

from top to bottom, literally from birth to death, including everything of economic importance, direct or indirect, education, sanitation, thrift, consolidation of holdings, reduction of extravagance and waste, the avoidance of unproductive expenditure on litigation, ceremonies, etc., the placid acceptance of remediable defects, the slothful inactivity before preventible disease in man or animal, and so on. To achieve the uplift of the masses of people living in the 35,000 villages of the Punjab, there is one and only one means to hand—the people themselves. Under existing circumstances, it is idle to talk of effecting uplift except through the instrumentality of the people themselves; the numbers involved make it clear that whatever work has to be done must be accomplished by employing the people on their own uplift, and the simplest and most effective way of doing this is to organise them into bodies to work for the improvement of their own villages. If India in general, and the Punjab in particular, are to see better living, the people of each village must be taught the means, they must be made to understand that they need no longer live in their present unsatisfactory condition, that their debt is really a voluntary thing due to their refusal to struggle out of it, that their crops are poor because they will not grow better ones, that their cattle bring forth inferior beasts because they have no opportunity to bear superior ones, that their need to borrow is due to their neglect to save, and that a better state of things will come into being when, and not before, they have agreed to accept the conditions by which alone improvement can be gained. The people must be convinced that they could have immensely better homes, cleaner streets, purer water supply and healthier lives if they would only bring these into existence. Individually, each is helpless; organised and led, there is no end to their possible achievement. For any outside agency to undertake the reform of 35,000 villages, generations must pass before the task is finished, if everyone worked with his fellows to improve his own village, a year would see a revolution. It is unlikely that the above view will be rejected by any; the means will be admitted, the possibility of achievement will be doubted. What then should be the role of government?

If it be accepted that the people must do whatever they are capable of doing, then the first duty of government is to undertake what no one else can, to supply what the people lack, to do as much good and as little harm as possible and above all to assist without in any way weakening the responsibility of the people for their own future lives. As the present standard of living in every direction is so low and calls so urgently for a remedy, government must not sit idle and await the appearance

of other agencies where these are obviously inadequate to the task. In some provinces, there is an idea that government should be inactive in the hope that time will produce philanthropists in numbers sufficient for the work, for it is held that such things are better done by private philanthropy than by State agency and that the rich have a right to be good to the poor. The argument need not be discussed when action is so urgently required ; the object is to get the work done and the end is vastly more important than the means. Government alone can command service and must exhaust its powers to create the better living of the people. To this end, government must provide leadership wherever leaders are not voluntarily forthcoming ; leadership is the first need if the people are to be taught to help themselves, to manage their own affairs, to form and run their own organisations, to work for their own uplift and to devote their time and labour to the improvement of the conditions in which they live. The prime task of government is education, including in this term propaganda of new ideas, new discoveries and new information of value to village life.

If the people are to be organised, they will need guidance in the minimum requirements for successful association, for sources of failure are many and most are well known, and so rules become necessary ; human nature being what it is, weaknesses must be guarded against, the members of a society require protection against the committee and the committee against the members ; if public confidence is to be gained there must be protection for the public in their dealings with the society, and so on, but to prevent the idea getting abroad that government is interfering with unnecessary regulations, all rules must be understood by the people. And so gradually, there comes into being a department of the State to teach the people the safeguards against repeated failure and the methods long experience has proved to be the best for associations of people working for their own mutual benefit.

In the Punjab inquiries have shown that most men have many hours not productively employed ; it must be obvious to everyone that the devotion of even a part of these idle hours to improving conditions of living in villages would achieve a miracle. The labour is there ; the payment is the reward of better living ; the chief obstacle is inertia, the persistent acceptance of bad conditions as something inevitably persistent.

The Punjab government has taken an enlightened view of the value of co-operative organisation, and much has been done in a comparatively few years ; but old debts, old customs, old standards, and above all placid submission to what appear to be, but most certainly are not, impositions of divine will stand in

the way. The means to better living are there ; it is the will and determination to achieve better things which are as yet dormant.

From the soil, it is more than possible that crops of twice the value could be raised ; but this alone will not be enough to create the new Punjab. For this it is not from the soil but from the people that the harvest of organised work for the common good must come. And it can be done.

CHAPTER XVIII.

THE ECONOMIC CAUSES OF PUNJAB POVERTY.

Common misapprehensions—incidence of land revenue—is India poor?—compared with other countries—lack of industries and its effects—on famines—and food supply—low average earnings and their cause—lack of thrift in the past—and its causes—lack of determination to live better—and of organisation for wealth—religious sentiment—waste—under-employment—unnecessary middle-men—waste of female labour—insects and animals—seed—manure—discipline—fragmentation of holdings—waste of land—lack of historical knowledge—occupational castes—neglect of agriculture—by commercial and educated classes—diet—mortality amongst cattle—the Will to Live Better—history again—the study of rural economics.

On few subjects is there more misapprehension than that of poverty in this country. For some abstruse reason, it is deemed necessary to write always in a tone of pessimism for which it would be very difficult to bring forward adequate justification. A distinguished Indian writes: (1) "The general outlook upon life in India, as things are now, is too gloomy to permit sound individual or social development. Far too common is the belief that life is merely a transitory stage in the passage of the soul to another world. That notion chills enthusiasm, kills joy and promotes fatalism.....In some cases the joint family system tends to produce drones; some Indians actually take pride in the number of persons they maintain in idleness..... While Indians feel that life is a burden, people in the West are full of hope and intensely active." There is ample material available to controvert many of the current views; but it needs to be handled by persons skilled in economics, and determined to bring to the task minds free from bias, racial, political and religious. There are so many fallacious statements uttered that it is not easy to trace the origin of the misunderstandings. Some are palpably absurd. Such, for instance, is one that this is the only country where land-revenue is collected (2). Any book of reference would have provided a correction. Similarly, to argue that the rise of prices of agricultural produce has not brought

(1) Cf. Sir M. Visvesvaraya, *Reconstructing India*, p. 237—8.

(2) A member in the Punjab Legislative Council.

benefit to the rent receivers (1) indicates an omission to note that about half the land in the province is cultivated by tenants paying rent in kind, so that the rent receivers secure full advantage of any rise in the price of the produce in which their rent is paid. Most of these fallacies when examined seem to owe their origin to a marked disinclination to admit the responsibility of the people for their present state. It is everybody's fault except their own.

In extenuation of the prevailing misapprehensions, it may be at once admitted that there does not appear to be any publication containing a summary of the facts of rural problems in various countries. A patriotic Punjabi, desirous of placing before his fellow-countrymen an accurate comparison of conditions in other rural countries with those prevailing here, would find his task beset with difficulties. The library facilities are inadequate; there is no reference book for the province setting forth in convenient form the salient facts contained in the many official reports, so that, as non-officials seldom read these, they retain views that are easily open to refutation; the form in which official statistics are maintained is apt to vary in a manner which is puzzling; it is not easy to ascertain the total land-revenue of the province; it is impossible to learn with any approach to accuracy what exactly is the cultivated area which represents the Punjab holding; a really accurate statement of the outturn of crops is not available in any publication, for all official estimates are designedly based upon the most cautious figures, so as to relieve the administration of the charge of error in the direction inimical to the interests of the owners. Perhaps, the most inaccurate views currently held relate to the incidence of the land-revenue. There is ample material in the multitude of assessment reports to indicate what a very cautious attitude is adopted by Government in framing new demands from the landowners; yet, there are spread abroad suggestions that can only be described as grotesque. In another part of this book it has been shown that the actual demand of the State amounts to about 5 per cent. of the gross produce. In Japan (2) the demand is about 17 per cent.; in Turkey it used to be $12\frac{1}{2}$ per cent. but this was raised in the course of the war to 25, $37\frac{1}{2}$ and even to 50 per cent. This demand was based upon the estimate of officials for the year, so that it was a not infrequent occurrence for the official, from private motives that need not detain this discussion, to frame an estimate that would bring out the share of the State equal, or even more

(1) A Professor of Economics.

(2) Robertson Scott, *Foundations of Japan*: Says the rent is usually 57 per cent. of the rice harvest in the paddies and 44 per cent. of the crops on the non-paddy land. All taxes and rates are paid by the landlord and amount to from 30 to 33 per cent. of the rent.

than equal, to the whole produce. In England the land revenue was commuted for a capital sum many years ago and the chief burden on land now is the rates: these are roughly less than 2 per cent. of the gross produce or about one-seventh of the rent. But farmers of over 150 acres may earn incomes that bring them within the Income Tax limit. In Holland the land is valued, the sum arrived at is regarded as capital and on this capital 4 per cent. is assumed as income; this income is then taxed, the tax being divided between the owner and occupier. In Spain there is a land tax, but its assessment is so defective that many owners escape, while others are made to pay far more than their share. In one province alone it was estimated that over a million acres of land had not been declared for the tax. Belgium has a property tax and a succession duty. Greece levies a direct tax on income from land. Bulgaria taxes the land, as also does Rumania. In short, a land or property tax is an important source of public revenue in practically every country, but it would be difficult to name one wherein the assessment of this tax was levied with greater care or more caution than in this province.

Another common misapprehension that constantly recurs whenever the question of poverty is discussed is that India is poor, while Europe is rich. In the note to the Report of the Industrial Commission distinction is drawn between India and Europe, and much argument is advanced to defend the Indian from the charge of being less capable than the European in the matter of industries. Europe, in the opinion of the writer, is industrial while India is agricultural, and this is the main reason of Europe's wealth and India's poverty. Now, so far from Europe being mainly industrial, the industrial tracts are strictly confined to definite areas, usually possessing some special advantage facilitating the prosecution of some particular industry. North-Western Europe may be described as predominantly industrial; but there are large divisions of England, and still larger of Scotland and Ireland, where there are no manufacturing industries, and yet where there is a high average standard of prosperity, and where a charge of being backward would be resented. Southern Europe and European Russia are mainly agricultural; lack of power in the form of coal being an important cause of the absence of manufactures. It is difficult to make a comparison that will be accurate and useful; but it may be noted that of Spain it is said that "Agriculture has suffered from systems of land tenure which have militated against good cultivation. The cultivation of the land is left to men who are too poor, as well as too ignorant, to do it justice. . . . The agriculture of Spain is inevitably bad . . . it is given up to antiquated routine . . . Where little is produced by hard labour with poor

instruments, the poverty must needs be great. . . . The labourers are huddled in squalid outhouses, are paid very ill and are fed on inferior bread mixed in salads with vinegar, a little oil and vegetables. . . .” In Greece “in many parts the methods and implements of agriculture are very primitive. There is little use of manure or scientific rotation of crops. In Thessaly the wooden ploughs used differ little from those of more than 2,000 years ago.” In Yugo-Slavia the methods of cultivation have varied from place to place. “In the less fertile parts they have always been very crude, the primitive wooden plough, which does little more than scratch the ground, being in general use.” In other tracts the efforts of Government to improve agriculture are bearing fruit. In the new territories, however, “owing to the exactions of corrupt officials and the ravages of brigands, the peasant never enjoyed security of life or property. . . . The methods of cultivation were still more primitive than those employed in the old kingdom. Agricultural implements were crude, manure was seldom used, and there was general ignorance about the rotation of crops. . . .” Of European Turkey it is said that “Agricultural methods are in general most primitive. Ploughing is commonly done with the one-handed plough used in Biblical times. The ground is not deeply ploughed or dug, and manure is used only in some of the villages inhabited by immigrants from the lost Provinces of Europe. Sowing and reaping are done by hand. The grain is threshed on floors in the open air. The wind is used for winnowing. The grain is very seldom screened, even when intended for sowing, the effect on succeeding crops being lamentable.” (1) In Bulgaria the primitive wooden plough is still in use; little is known about the rotation of crops, and artificial manures are seldom used. In short, in South Europe, agriculture is as little advanced in comparison with its condition in ancient times as it is in the Punjab. Everywhere, if there is improvement to record, this is due to the action of Government stimulating study, encouraging the formation of co-operative societies and establishing colleges, experimental farms, etc. etc. So far then from this province being behind Europe, it, now at least, is as progressive as South Europe and more advanced than large portions of that continent while the standard of comfort in many places compares well with that found in more northern Europe. Those who like to ascribe poverty to the political circumstances of this country should remember that all the most poverty-stricken States are self-governing.

In the countries briefly mentioned the majority of the

(1) The quotations are from the various Foreign Office handbooks.

population is dependent upon agriculture, and the general standard of wealth is low. Turning to North-Western Europe, although industries are comparatively more important, there is still appalling poverty. Generally speaking, wealth is more evenly divided in an agricultural country than in one wherein industries play a greater part. The return from agriculture, over a period of years, is more certain than that from industries. In the latter, failures are frequent, and the losers in the race sink to the slums or constitute that crowd of unemployed or unemployable which presents to the statesman the most difficult of problems. In the Punjab the people are under-employed but there is little real unemployment; it is in highly organised industrial countries that unemployment becomes acute and where in times of depression the real threat of starvation to millions of the people is only prevented from becoming an actuality by means of doles from the State. England is still experiencing what Indian historians would call a famine worse than has ever been recorded in her own history, millions of men remaining on relief for several years. It may be true that the average money income is higher in an industrial country than in one predominantly agricultural, or amongst workers in factories than amongst workers on the land; but this of itself means little. In India the comparison is difficult, as the money wages paid to factory workers represent their total reward while an agricultural labourer enjoys many rights and amenities and often lives in greater health and comfort. Everywhere the money wages paid to agricultural labourers are small. Generally speaking, industries are more highly organised, there is more capital employed per worker, higher skill and intelligence is found in the direction and financial facilities are better developed. (1) The nearest approach which agriculture can present to these factors is afforded by Denmark, and the most patriotic may well be satisfied if his province attains to the standard of comfort that is found there. In a country like England or the United States the greater portion of the wealth is accumulated in the hands of forty or fifty thousand persons or corporations. (2) Agriculture

(1) See Orwin: *Agriculture in Oxfordshire*, p. 87.—“The view of some is that agriculture as a basis of investment cannot offer any satisfactory prospect comparable with other industries. There are, however, a sufficient number of estates and farms on which the management gives results that do not support the theory.....While comparisons have frequently been drawn between agriculture and other industries with reference to their capabilities as producers of dividends, little has been done in the way of examining the different methods under which they are organised.”

(2) In England only 59,000 enjoy incomes over £2,500 a year. In the U. S. A. it is estimated that 9 per cent. of the population own 70 per cent. of the total wealth, 21 per cent. own 5 per cent. and 70 per cent. share the rest, with an average of £43.

does not tend to such vast accumulation of wealth, so that in a country predominantly agricultural there are seldom many very rich persons. It is not intended here to decry the aspirations for industrial development; far from it for industries provide for local agriculture an assured market which renders possible the cultivation of products which yield a higher profit than those now grown, or enable the cultivator to secure a higher price for the same things. If the Punjab cultivator could get for his wheat the price which the English factory workers pay for it, he would be so much the better off; but the development of industries in this country is never likely to bring in any great advantage in this direction.

Successful industries will tend to send up the standard of living, including the more general consumption of articles of food now regarded as luxuries. The cultivator will find himself able to use more intelligence and more capital with greater profit than he can in growing wheat. In such a commodity as milk, for instance, he will have a monopoly of supply, and may be expected to reap the advantage open to all monopolists: in other articles of which the transport over long distances presents difficulties he will possess a partial monopoly, or at least a protection from competition that will enable him to demand and secure high prices.

Connected with this argument, there is another common misapprehension that must be discussed; that is, that industries will prevent famines, and that famines are the result of the absence of industries. So far as records go, there always have been famines in India, and the sacred writings of the Hindus refer to periods of distress of an intensity unknown in India in the last hundred years. A famine in the old days meant an absolute shortage of food in the area affected, due to some natural calamity such as a failure of the monsoon; nowadays it means such widespread unemployment in rural areas that the people are unable to purchase the food that is for sale. When communications were defective and means of transport primitive it was possible for one tract to suffer the rigours of acute scarcity while another might have a surplus over its immediate requirements. Where there was no free commerce in foodstuffs, there would seldom be any attempt to produce more than was required for local consumption. A slight surplus would lead to a glut which would render it unsaleable. In such circumstances a large industrial population would merely serve to accentuate the gravity of the situation; and there could never have been any considerable industries before the improvement of communications and means of transport rendered the free movement of foodstuffs, easy. Far from the seaboard, or the banks of navigable rivers large industrial centres would have been impossible. Even under

✓ modern conditions of transport and communications the development of industries might increase the intensity of famines; as the Fiscal Commission pointed out (para. 48) a famine that reduced the purchasing power of the agricultural population might throw out of work many labourers in industries for whose products the demand had been seriously diminished. So far from industries preventing famines they are subject to famines of their own, when for any reason a decline in the demand for manufactured goods throws the workers out of employment. The idea that industries somehow will prevent famines seems to arise from the fact that famines are associated in people's minds with a failure of the monsoon and therefore with a local shortage of food. It is true that industries are not subject to the vagaries of the rainfall but the workers must be fed and their food must in the end come from agriculture far or near, and anything that interrupts the supply, such as the Great War, brings an industrial population face to face with the risk of starvation. As the Fiscal Commission pointed out only 7 per cent. of the rice grown and 10 per cent. of the wheat is exported, there is little margin to feed the new industrial population, and therefore an expansion of industries without an expansion of agricultural production would certainly involve the country once more in the risk of famine. The influence of industries in diminishing the risk of famine lies in the wealth produced which enables the people to acquire resources and savings and effect insurances against periods of unemployment(1). But Germany nearly starved England into defeat in the Great War.

Turning again to the Punjab, it will be obvious that for the growth of industrial centres there must first be a surplus of food produced within the province which can be drawn upon to feed the factory hands. Those who object to the export of foodstuffs when many are ill-fed overlook the fact that an annual surplus for export provides a reservoir which can be drawn upon in time of scarcity. If, for instance, it be assumed that in a normal year the Punjab exports six hundred thousand tons of wheat, then, before there can be any danger of an actual shortage of food within the province, the production must fall below the normal by an amount equal to this quantity usually exported. Any

(1) Assuming, that is to say, that population is going to increase, then industries provide an alternative source of livelihood, and enable the people to earn what will enable them to purchase food. A local shortage of home-grown food will not lead to starvation. But it is not correct to say that industries relieve the pressure on the soil for the supply of food when food cannot be imported. If a country is dependent on its home-grown food, industries will not relieve the pressure, but will tend to increase it, and so increase the distress resulting from a failure of crops. The percentage of wheat produced that is now exported has declined to about 2 per cent.

shortage will fall first upon the export trade. (1) Thus a large export trade, which reflects a large surplus production of food, is the surest preventive against actual famine. On the other hand, where food is available, but the income of the people is apt to sink suddenly owing to calamity of seasons, then industries will serve to enable them to earn the wherewithal to buy. In this province a large industrial population would constitute a menace when a failure of the rains led to a marked decrease in production, so that a large normal annual surplus available for export must be encouraged as essential to the growth of manufactures. As has already been pointed out the geographical position will serve to place difficulties in the way of importing food on a large scale. It is not easy to imagine conditions under which imported foodstuffs will normally form a large portion of the diet of the people, and, if a sudden emergency ever renders the people of the Punjab dependent on food brought in from distant places, it may be assumed that a considerable proportion of them will be unable to pay for it. Thus progressive agriculture is a necessary preliminary to progressive industry.

If the above argument seems far-fetched, it may be recalled that it was not until the discovery of the great American prairie lands as wheat producers, of steamships and of railways that any really rapid industrial development took place in Europe. So long as a nation was dependent upon home-grown produce for its food supply, and importation was beset with difficulties there could not occur that rapid increase of population which was so marked a feature of the industrial revolution. (2) There is a limit to the number of human beings that can be supported on a given area; what that limit is and whether it has been reached is immaterial; if foodstuffs can be imported from abroad, then the growth of industries will enable a country to support a population far in excess of what agriculture alone would render possible. But, when a country becomes dependent upon imported food, it becomes dependent upon those countries from which this food is imported and upon all countries which have the power to stop that import. If ever the Punjab becomes dependent upon outside sources for the food of its people, its position will indeed be precarious.

Thus far, the discussion has been concerned with refuting some of the more common fallacies that clog the proper understanding

(1) There could not, of course, be a normal surplus unless there were an export trade; a simple fact sometimes overlooked.

(2) Agricultural improvements preceded the industrial revolution. Thorold Rogers wrote: "The improvements effected in English husbandry during the course of the seventeenth century more than doubled the population" (Vol. V, p. 64). In the nineteenth century the sudden influx of cheap food led to a large increase of population that could hardly have occurred without this supply.

of the problems of Punjab poverty. It has been shown that this province is not more poor than many parts of Europe; if its agriculture is less advanced than that in the North-Western portions of that continent, it is certainly not so in greater degree than in South Europe. Also it enjoys internal and external peace, and is less heavily taxed than the countries bordering upon the Mediterranean; it has probably a better railway service; and if its roads are inadequate to its needs they are less so than in many tracts in the countries referred to. It is difficult to make an accurate comparison, but there is reason to believe that the majority of the peasants in this province are better clad, and better fed than their fellows in these countries, and in other provinces of India and in most of Asia as well.

Poverty is a relative term. It generally means inability to secure more than the bare necessities of existence. It is a negative phase, of which wealth is the positive. Wealth results from the combination of intelligent direction, capital and labour or power. Poverty results from the absence of one or more of these factors, or from their inefficient combination. Both really are capable of being interpreted as capacity to satisfy human wants. People who want very little in the way of food, clothing, housing and pleasure are always poor, even though they are contentedly ignorant of the fact. The starting point on the road to wealth is the existence of wants demanding satisfaction and urging men on to greater and even greater efforts. But the unaided efforts of individuals seldom lead far; they require for their fruition intelligence, capital, labour and command over power. Without these man seldom wins more than the bare necessities of life, and nothing more. This applies to all races and to all countries. It explains poverty in India. The common phrase that the average income is low is misleading. It is the average earnings that are low. And this is because the average production is low in industry and in agriculture. And average production is always and everywhere low when man struggles without the intelligence, the capital and the power necessary to enable him to extract more wealth from his surroundings. (1) There are, of course, more causes of poverty, but in one form or another they come under the above heads. The reasons for the existence of these causes are to be found in the history of the province. Centuries of disturbed conditions have served to prevent the growth of those characteristics which in other countries have rendered the accumulation of wealth possible. Foremost amongst these is the spirit of thrift. There is hardly any understanding of the place occupied by thrift in North-Western

(1) Compare the poverty in the western counties of Ireland, or in the Scotch Hebrides, with that of the Punjab.

Europe. In England hard times, famines and bad seasons rendered the practice of thrift a necessity if a farmer were to survive; and as Thorold Rogers has pointed out, the practice, through long enforcement, became a habit. When, later, the industrial revolution brought in its train fortune and distress, success and failure, the sufferings of the people once again compelled thrift as the one means of escape from starvation. In spite of gloomy opinions, the industrial workers of Great Britain are learning thrift and the hundreds of millions of pounds held by millions of them in Savings certificates and in the Post Office Savings Bank indicate how keenly is the need for thrift now appreciated. In France the thrift of the people is the basis of the country's prosperity; in Germany the lesson has been well learnt, and many thousands of credit societies systematically encourage the deposit of small savings, with results that are truly astonishing. (1) In Great Britain the co-operative societies possess nearly one hundred million pounds share and loan capital, and in a single year their surplus on transactions amount to twenty million pounds, most of which is returned to the members. Over 18 million pounds are invested in buildings and 30 million pounds in mortgages and other securities. The vast majority of the members, estimated at 95 per cent., earn incomes that are below the income tax limit. That is to say, they are drawn mostly from the working classes. It is not surplus money that has built up this enormous edifice, but half a century of well organised thrift practised by the poor. Almost every individual and every community wastes sufficient money every year to found future prosperity. The twenty million pounds surplus, referred to above, is the result of systematic organisation to save waste. It represents not savings from income, but savings from expenditure, *i.e.*, what was formerly wasted. In the Punjab until the Postal Savings Bank was introduced there was no organised institution to which small savings could be entrusted. These banks were originally intended for Government servants, clerks and other wage-earners in the towns. They have never appealed to the agricultural class; about 97 per cent. of the depositors are not agriculturists, and the total number of these latter using the banks does not exceed 3,000 in the Punjab.

Sufficient has been said to show that the first cause of poverty has been the absence of thrift; only by thrift could there be accumulated the capital required to improve the land and make

(1) It was only by systematic thrift, resulting in large accumulations of capital that Germany was able to embark upon that policy of economic penetration which gave her such influence in the world. For instance, prior to 1914 Germany had acquired almost complete economic control over Rumania and extensive influence in Italy. But she dealt a terrible blow to thrift when she devalued the Mark.

it more productive. This absence of thrift is largely due to prolonged continuance of unsettled conditions, but, to some extent, it may be attributed to the fertility of the soil, to the small amount of labour required to make it produce a crop, to the fact that two crops could be grown in a year, thus reducing the period of waiting (1), and to the Hindu joint family system which does not permit of the lazy and incompetent being thrown on to their own resources. There is also to be borne in mind the fact that the accumulation of wealth was not only dangerous, but was outside the philosophy of the people (2). As Mr. Moreland told the Royal Commission on Agriculture, "subject to local and temporary exceptions the human environment in India from the twelfth to the eighteenth century was such as would necessarily produce a servile mentality, with the aspiration to rise held in effective check. It was fatal for a man to raise his standard of life, because to do so marked him out as fair game for robbers and extortioners; to be suspected of property was a dire calamity, and those men only could be accounted happy who could spend their day's wages on their evening meal." "The land would give a plentiful yield if the peasants were not so cruelly and piteously oppressed;" "give the poor people leave but to lift up their heads in one year's vacancy from oppression." Such phrases as these, taken from Portuguese, Dutch and English writers of the period, give an idea of the environment in which the peasant lived, an environment which penalised productive effort, which necessitated the concealment of any surplus income that might accrue, and which operated to stereotype the low standard of life which offered the only chance of being let alone.

The cultivators of the province do not seem to have any folklore indicating the use of any implements more efficient than those now in common use; and it would appear that agriculture has never reached a stage that would be regarded as advanced. The land yields so easily to the simplest kind of tillage that the need for something more productive does not seem to have been felt. Thus there has been wanting the stimulus that might have led to the employment of more labour per acre or of extra power. The holder of four acres still grows wheat as if he held forty acres; the application of the extra labour needed to grow vegetables or

(1) The long, trying English winter, when the soil produces so little, must have played an important part in developing the idea of saving. In this province the normal period between crops is so much less that it is not so necessary to look as far ahead. The English winter has had much to do with thrift amongst the working classes.

(2) Cf. Professor Kale: *Indian Economics*, 3rd Edition, pp. 41—43, especially p. 41, foot-note 2. India differs from England in that in the latter country "the past has been devoted to the accumulation of wealth". The people of the Punjab could easily pay for the canals and railways, and so save interest from being paid in England.

small fruits is regarded as derogatory. It is obvious that the employment of less labour or power than the land will yield a profit to must in the long run prevent the increase of wealth, but for any improvement there must be a change of outlook, a determination to secure a higher standard of living and acceptance of the conditions, hard work, hard living and hard saving. The Punjab small holder, if he is to prosper, will have to accept the same standards of work as the small holder of Europe.

But more than anything else, the lack of skilled direction is responsible for the poverty of the country. The mass of the people have not known how to increase their outturn. For centuries the agriculture of England remained stagnant; for yet more centuries the agriculture of Southern Europe has remained stagnant. The Punjab has not yet felt the stimulus of those discoveries which led to the great advance achieved in North Europe, just as their influence is still barren in Spain, Italy, Greece and other countries of the Mediterranean. (1) The self-sufficing type of agriculture common over its greater part is antagonistic to changes designed to produce bigger profits. Until the cultivator regards his fields as a source of profit he will never progress far.

There is one generalisation that can usefully be made because it will assist in the discussion of a programme of construction, and that is that the Punjab is poor because it is not organised on the lines that lead to wealth. Such organisation as has existed has been more or less military, designed to preserve in power the dynasty of the day, or religious. Social organisation is almost entirely on religious lines, and unfortunately the religious leaders have not made economics their study. The greatest organisation for the promotion of the prosperity of the people in countries like Belgium or Italy is the Catholic Church. The priests have taken practical interest in the material welfare of their flocks and have led the movement to establish co-operative societies. There is no parallel to this in the Punjab. The religious influence has, if anything, exalted the spiritual and ignored the material. If the denial of the world, the withdrawal from the search after material gain and the resignation of all wealth are regarded as virtues, there must be a powerful influence working against the steady accumulation of capital and goods from generation to generation which cannot escape responsibility for much that is deplored to-day. The economic effects of religious beliefs can

(1) *Business Men's Commission on Agriculture*, p. 189. The main means of improving the economic position of the farmer must be sought in measures which reduce his costs of production:—(1) ways in which the farmer himself may lower costs, (2) ways in which farmers through their own organization and with the co-operation of other private agencies, may develop more effective methods of production and marketing of their crops.

no more be neglected in India than they can be in Europe. (1) The distribution of sects and of wealth throughout the European continent are not accidents. Nor are they entirely independent of each other. A good example of the influence of religious sentiment on the problem of poverty is afforded in the United Provinces by the desire of the Hindus that the sacred stream of the Ganges should flow in its natural course from its source to its mouth. The water is used for irrigation purposes and undoubtedly its withdrawal from the river left too little for bathing purposes at certain places. The High Caste Hindu religious societies petitioned for a considerable amount of water to be left to flow, and their demand would have resulted in the withdrawal of irrigation from about 30,000 to 40,000 acres of rabi, and from 15,000 to 20,000 acres of kharif cultivation. The cultivators in large numbers, although for the most part Hindus, petitioned for the retention of the water for irrigation, one petition was signed by 18,000 persons from 180 villages. The Government sanctioned an arrangement which entailed a loss of $1\frac{1}{2}$ lakhs of rupees revenue and an estimated loss of 12 lakhs to the cultivators annually. Here was a definite clear-cut choice between religious sentiment and material prosperity.

If the arguments advanced above are accepted, then the methods by which wealth can be increased should not be difficult to find. The province can never be prosperous until it is thoroughly organised on economic lines. In some respects it will apparently be impossible to take full advantage of its potentialities; the Mohammedan view of interest has not, as in England, served to stimulate thrift, for the reason that, while refusing to accept, they have not hesitated to pay, interest. Were it otherwise, were the Mohammedans of the province as sturdy in their refusal to pay, as they are in their refusal to take, interest, then they would be forced into thrift as the sole means of insurance against

(1) Cf. Thorold Rogers, Vol. V. p. 11, *et seq*—The following extract from an Indian newspaper may be quoted here as expressing one view :—

There have been almost as many books and pamphlets written on the poverty of India's masses as on any other subject of importance, but few of them have dealt with the root cause of poverty in this country. The fact is the Indian is by habit a low-standard being, and nothing in the world can transform him into a high-standard being. There are many reasons for this, but perhaps the most important is the fact that the Indian is a fatalist. He regards his life as merely a phase in a long series of episodes which culminate in peace and prosperity. It is certainly a noble ideal, but is contrary to the spirit of economic development. That is why the Indian continues his low standard of living, which means a corresponding low productiveness. Social tradition in this country takes its cue from the standard of the people. Think of the number of Indians whose caste prohibits them from doing certain work—sometimes very useful work, too. The Hindu loses caste by doing quite a number of things, but rarely by doing nothing. India is the only country that attempts to support thousands of professional beggars because the question is bound up with caste.

recurring bad seasons. On the other hand, the Hindu veneration for the cow imposes an insuperable barrier to its exploitation as the most valuable animal known to man, and prevents the growth of a profitable animal husbandry. The loss to the province is, and must remain, incalculable. It is beyond doubt one of the most potent influences retarding the advent of prosperity. (1) In other directions the religious feelings of the people encourage waste and prevent the economic use of potential wealth. Pigs, bones, hides and eggs are articles of great importance in poor countries, but cannot be exploited to the full here and potential industries of lac culture and gut manufacture are neglected or left to the lowest castes. The objections to the use of animal fat in soaps imposes a considerable obstacle to the extension of its manufacture in India; a similar objection to the use of sugar bleached by the use of bone charcoal is met by some factories in Bihar using more expensive methods which provide sugar at double the usual price for those with this particular prejudice. Similar feelings prevent the use of bone-meal and night-soil as manures and lead to the use of cow-dung for fuel. Sericulture and beekeeping are other industries rejected by the orthodox.

In the above discussion, so far as it has gone, stress has been laid on the negative causes that account for poverty. Of positive causes, the greatest is undoubtedly waste. The East has not yet learned to convert waste into wealth. Other things being equal, the wealth of a country will vary with the proportion of its population engaged in production, so that a large number of persons who derive a livelihood from pursuits that add nothing to the general dividend are a source of weakness. The waste of human material in this province is very great. There is waste due to the high death-rate, which removes from productive employment many who are of the best ages, or who have gathered skill or experience. There is waste due to preventable illness, and the inefficiency that results from frequent suffering; what this amounts to is beyond computation, but the advanced stage reached by medicine in Europe is a powerful factor in industrial efficiency. The number of days' labour lost through malaria alone must be a serious item in prolonging poverty for out of a total death rate of 29.5 per thousand, as much as 18.6 is due to fevers. There is waste in the defective agricultural system that results in men doing little or no work for a considerable portion of the year. It is probable that the work done by the average cultivator does not represent more than 150 days' full labour in twelve months; in the dry (barani) tracts

(1) The modern agriculture of North-West Europe is founded upon animal husbandry; what is best worth teaching is thus not acceptable here, and hitherto local talent has not provided an adequate substitute.

it is probably not more than 100 days; in the canal irrigated area it may be 150 to 200 days. But if the work of all described as "workers" be reckoned then the total number of days of eight hours each would be less than 100. There are many on the land whose labour is almost nominal. Apart from the hours of work the standard of effort put forward is low compared with Northern Europe. There is no doubt whatever that the available labour supply on the holdings could obtain much higher yields if it were devoted for eight hours a day for 300 days in the year. Much the same criticism has been applied to Japan: Mr. Robertson Scott in his *Foundations of Japan* writes:—

What the (Japanese) farmer must do is to work not harder but better. At present he is not working on scientific principles. The hours he is spending on really profitable labour are not many. In 26 villages, where farming calls for much labour, it was found that the number of days work in the year was only 182. Statistics for Eastern Japan give 186 days. As to a secondary industry, one or two hours work at night at straw rope making for a month may bring in a yen..... A professor of Agricultural Politics set forth the following reasons for the farmers' position:

The average area cultivated per family is too small.

The law of Diminishing Returns.

Imperfection of the agricultural system: mainly crop raising, not a combination of crop and stock raising as in England. No profitable secondary business but silk-worm culture..... The number of days of effective labour is relatively small.

The commercial side of agriculture has not been sufficiently developed...

Debts at high interest.

Character, morality and ability of the farmer are not fully developed.

Many expensive customs and habits....e.g., weddings and funerals.

A complete change of the generally accepted notion in this respect must occur before the province can advance far along the road to prosperity.

There is waste in the number of unnecessary middlemen engaged in distribution. Probably 80 per cent. of the shop-keepers in the ordinary bazar could be spared for more useful employment, but the big multiple store has yet to appear. There is waste in the diversion of the best educated brains from productive into non-productive channels, such as the law. It is estimated that about three or four crores of rupees are wasted every year in connection with litigation. This is largely a result of growing

prosperity and has been a marked feature of England when wealth was rapidly increasing; but there is no excuse for the excessive number of petty cases instituted in the courts. Over 500,000 original suits and 250,000 appeals and miscellaneous applications are lodged every year; of these the great majority are petty and altogether unnecessary. They bring to the courts every year about $2\frac{1}{2}$ million persons as parties and witnesses, of whom the great majority are working adults drawn away from their means of livelihood. The loss to the province in work left undone, in unproductive expenditure and in waste of energy is immense. (1) Meanwhile the province is starved of men with efficient knowledge on banking, industry and commerce, while the soil, the source of all new wealth, is in the hands of illiterate people who send their educated sons to the towns. There is waste in the relation between landlord and tenant, whereby the former provides no skilled guidance to the latter, supplies practically no capital to his enterprise and himself remains ignorant of what is best for the soil he owns. There is waste in the miserable system of rural credit, whereby a large number of usurers entangle the unwary peasant into a net from which there is only one escape. The drain of interest each year is not less than twelve crores, a sum which, devoted to improvement, would yield, results of incalculable benefit. It is curious that with the baneful results before them there are still people, people too who claim to be educated, who fail to see the difference between a system of rural credit that has involved the majority of the owners in debt, amounting in the aggregate according to the Banking Inquiry Committee, to over 100 crores of rupees, for which they can show practically nothing in return, and a system which, wherever tried, has led the people out of debt into comfort, has converted them from borrowers into depositors and has left prosperous communities where before were usury-ridden disheartened families. The evil of usury is not confined to India or the Punjab; it so happens that this province has afforded a more profitable field for its practice than any other in India, but it does not appear that it is more debt-ridden than were several parts of Europe before co-operation came to the rescue. There and

(1) Monier Williams: *Modern India and the Indians*, 1879, p. 211. "A limit should be put by law to the increase of native pleaders. If Indian money-lenders are metaphorically called incarnate curses, Indian Wakeels are rapidly earning a title to the same flattering appellation. I have heard natives complain of what they call the oppression of our Law Courts, with their elaborate machinery of expensive processes and appeals. What they mean is not that injustice is done, but that justice is overdone. They might, with more reason, complain of the oppression of their own Wakeel's who live by promoting quarrels, prey upon litigants, and drain the very life-blood out of their own fellow-countrymen." The Punjab is not alone in excessive litigation, exactly the same complaint is made in Ceylon.

here the system of co-operative credit applied to agriculture is showing the way from debt to savings but the recent fall in prices has increased heavily the burden on all debtors.

There is a vast waste of female labour, due primarily to custom and prejudice. The Census Report for 1901 has the passage:

"Nothing impresses Indian visitors to Europe more than the extent to which women are employed, and there is no greater obstacle to progress in India than the prejudice against the rational employment of women in occupations to which they are naturally adapted. A great source of natural wealth is thus lost to the country . . . Women are only employed in relatively large numbers in the indefinite and disreputable occupations."

The Report for 1891 states:

In 1881, 23 per cent. of the women over 15 years of age were returned as having definite occupations.....but it is doubtful if the figures can be said to have much value.....Working women are mainly of the artisan class.....In 1881, 39.1 per cent. were of the industrial, and 39.5 of the agricultural class; whereas our present figures show that the proportion is slightly larger among the artisans than among the agriculturists.....generally speaking, the working female population is almost exclusively of these two classes.

This should be compared with Japan where of 28 million women more than half are employed at either whole or part-time work. Eight million are engaged in agriculture and over one million in factories. (1) In most other countries the proportion of female labour to the whole is high; while its efficiency is equal to the tasks performed; the contribution to the national dividend resulting from this forms an appreciable part of the whole. If there were in Western countries a movement aiming at the exclusion of female labour from all except purely domestic tasks, that movement would endanger the whole economic fabric, and, if successful, would involve those countries in ruin. The Punjab discards what in England and elsewhere is an absolutely necessary element in the maintenance of their civilisation. The fact that there are tribes, such as Brahmins and Rajputs, which do not allow their womenfolk even to work in the fields is alone sufficient to explain their poverty. The work of women as clerks, shopkeepers, post and telegraph operators, factory hands, etc., and in connection with the fish industry, market garden, pit-tops, etc., has no counterpart here. In the course of generations the loss from this waste alone must have made material progress almost impossible. No European country could maintain its present standard of living without the assistance derived from female

(1) Ingram Bryan: Japan from Within.

labour, (1) and no European country could maintain its educational system without the aid of women as teachers. In all Western countries where compulsion has been introduced, more than three-fourths of the teachers in the primary schools are women. Here social conditions being what they are, not only is the assistance of women debarred in the primary schools for boys, but men teachers are sometimes engaged in girls' schools. (2)

There is vast waste from the depredations of insects and other animals; this waste is the greater where religious sentiment forbids the killing of these for food. The pigeons at a railway station where much grain is dealt with are sources of loss when they cannot be eaten. But this is a small matter compared to the loss suffered from insects that attack crops, or rats that consume in the course of a year appreciable quantities of wheat. The religious objection to the destruction of such vermin is a contributory cause of poverty, and will continue to be one until ideas undergo a change. The Imperial Entomologist has estimated this loss at ten per cent. of the crop, the cultivator receiving only 90 per cent. of the result of his labours. For the Punjab this would represent a loss of roundabout ten crores of rupees a year. In addition to this there is an enormous waste of human life and labour through diseases due to insect bites, and an incalculable loss of cattle due to the same cause. And yet there is opposition to the killing of insects. (3)

There is great waste in the use of infertile seed; what might form good food is thrown into the ground to rot, in the hope that some at least will germinate. Yet, although, amongst many intelligent men, the truth of this must be obvious, there is no attempt to induce shopkeepers and others to sell only pure seed; indeed perhaps in no other single instance is the absence of a concerted will to secure economic improvement more clear than

(1) There is a striking passage in "Reconstructing India" by Sir M. Visvesvaraya, p. 246:—If early marriages were stopped, there would be fewer widows in the land; and the superstition which prevents the remarriage of widows would be less keenly felt. Both common justice and prudence require that the evils of enforced widowhood and its attendant inhumanities and barbarous practices be removed. And he proceeds to deplore the appalling price the country has to pay in the shape of loss of work and intelligent effort from half the population of the country.

Nothing written here must be regarded as advocating degrading labour for women. Arthur Young writing of France in 1757 remarks that women ploughed, filled dung carts and performed other heavy labour, and to-day across the Jhelum women may be seen helping to pull the plough aided by donkeys.

(2) Quinquennial Report on Education in the Punjab for the period ending 1921-22.

(3) The American Business Men's Commission state (p. 108) that an important contributory factor in the recent (depressed) situation in agriculture has been the various crop pests which during the past few decades have infested the country. . . . The problem constitutes a serious future menace which must be kept in mind in shaping future policy.

in this complete apathy of the seller of seed towards the quality of his goods.

Perhaps no words could bring home to the reader a clearer appreciation of the enormous waste in the province from the above causes than the simple statement that on the average of ten years nearly five million acres a year, although sown, fail to mature a crop. The average "failed" area is 16 per cent. of the total sown, equal to the total area of five whole districts. The causes given in successive annual Season and Crop reports are white ants, hailstorms, high winds, rust, smut, insects, white fly and floods. At a modest estimate the total loss must be about 16 crores a year, much of which could be saved.

There is waste of manure. For centuries past the farmers of England were bound by the terms of their leases to return to the fields the straw, litter, etc., and were not allowed to sell it off the farm. (1) In the Punjab, as in the rest of India, good manure is burnt as fuel. Much evidence was taken by the Royal Commission on Agriculture on this question but the custom is too strong for the reformer. The evil is all the greater as Punjab soil requires the humus of cattle manure rather than the addition of artificials. Even if all the useless plant life which springs up in the monsoon were rotted down and added to the soil, considerable benefit would result.

There is waste from the weak sense of discipline, the real economic importance of which is not realised. In England centuries of hardship impressed the truth upon all classes; in Japan the Government has appreciated its value, and practically orders farmers and industrialists to do what is deemed most advisable. It is as if the statesmen had decided that the country was too poor to permit of every man doing what he chose, and that poverty could only be fought by skilled direction from the rulers. In Germany the extent of State regulation has long been a matter for comment, but it must be assumed that the rulers knew their people and considered that it was necessary to guide their actions in directions regarded as desirable for their own benefit. In England the rapidly increasing legal restrictions upon the individual are so readily obeyed that they seem to be a part of the character of the people, and to be the result of habit and evoke very little remonstrance; far less stringent restriction of individual caprice is regarded here as interference with liberty. If ever industries spring up in the province, strict discipline will be needed amongst all concerned; but it is doubtful whether the lesson will easily be learnt.

The real waste of fragmentation is seldom understood; where

(1) In Japan it is said that there is no need of sanitary arrangements as every morning the cultivators from the surrounding fields come in to remove the night-soil, and even the urine, and carry it off to their fields.

fields are open and scattered throughout the area of the village, it is customary to turn the cattle on to the stubble as soon as the crop is cut; there being no field boundaries to keep them on to the land of their owners, they wander over the whole ground and use it as if it were common. So long as everyone grows the same crops ripening at the same time, little harm results; but such a practice becomes quite unsuitable if any variation in cropping is sought to be introduced. Any cultivator, more intelligent than his fellows, who desired to work on an improved rotation involving the abolition of fallows, would find his neighbours' cattle straying all over his lands; while they in turn would object to his cattle grazing on their stubble unless their own were in turn allowed to graze on his. A simple example would be a cultivator devoting his land to fodder crops which were still on the ground when the cattle were let loose by his neighbours. The open field system thus serves to prevent the introduction of new methods, and even of new crops, unless these are cut at the same time as those of others. Under present conditions the labourers of the village (the *kamins*) and others possess by custom a right to send their cattle to graze upon the stubble; a system abolishing fallows would have to meet the objections of this class. The fact is that the open scattered fields do not give the cultivator complete freedom over his cropping; he cannot devote his land to what he considers best and most profitable. There is incalculable waste in the devotion of land to crops not because they are the most profitable, but because, in times when communications were bad and means of transport defective, it was necessary to grow food for the home on the home fields. This concentration of effort on the production of food for the family, rather than on the needs of the market, tends to retard change towards more profitable agriculture. It prevents the land being put to that use which will yield the highest profit.

The hills in the submontane tracts are probably capable of producing fine crops of fruit, etc., but are devoted to the cheapest form of millets, because millets were the customary things to grow before the great canal colonies ensured a regular supply of wheat, and railways were constructed to distribute it. The idea of putting part of the holding under commercial crops, *i.e.*, under crops which will be sold and not used in the household, is growing; but the idea that a man need not grow for his household consumption if he can put his land to better use is hardly noticeable. Even around the big towns where intensive vegetable growing on highly manured and highly irrigated land is common, the cultivators will still waste part of their resources on growing wheat for the home.

There is waste in the uses to which various products are put.

Cotton seed is fed to cattle in a crude form which is beyond the power of the animals to digest. From the seed there should be extracted the short fibres which could be used to make felt for hats, etc.; the husk should then be decorticated to form a fuel; the kernel should next be crushed to separate the oil which is of value as a cooking material, or as a basis for soap, etc., while the residue is, in America, used as human food when mixed with flour, the resultant cake is a food which cattle can digest, or which will serve as an excellent manure. This is only one example of the immense waste of the products of the province. Many others could be enumerated. The waste of vegetable matter that could be utilised as a source of power is only recently attracting attention, but in every activity there is waste, and in every waste there is loss and a further cause of poverty.

There is waste in the vast areas left to Nature to wreak her capricious will on; perhaps, in no other single item of the catalogue does the essential difference in outlook between North Europe and India appear more clearly. The peoples of the North-Western portion of Europe adopt as their cardinal economic creed that, "God helps those who help themselves," and accordingly they measure progress in terms of man's increasing knowledge of the powers of Nature and increasing ability to divert them to his own ends. In South Europe and in this continent there is an almost fatalistic lack of faith in man's power to influence his destiny and an equally fatalistic readiness to accept whatever Nature unassisted may give forth. The idea that an acre of uncultivated waste may produce more fodder than an acre of cultivated land irrigated by canal constantly appears as a sort of background in discussions relating to ghi and milk. The Legislative Council and Assembly are asked to endorse the argument; Government is appealed to frame its policy on the false premise. Put in the language of vulgar plain truth, the argument is grotesque; clothed in a fervent appeal to religious prejudice, it commands the votes of those whose knowledge of rural economics is as yet elementary.

There does not seem to be anything in the province which destines it to everlasting poverty. There are definite causes which should prove amenable to suitable remedies. What these remedies are is matter for investigation, and some suggestions for reconstruction are given in another chapter. The main reason for the present low standard of living is writ large in the history of the last five centuries: a religious outlook which includes no incentive to the increase of wealth and a political system which removed all certainty of a worker's ability to enjoy whatever extra wealth his labours earned for him. There is nothing to be gained from the attempt to place responsibility on other

shoulders than those indicated by a survey of this period. If a considerable number of Englishmen of the present generation enjoy comforts and luxuries and all the amenities of life which wealth can procure, it is because for centuries their ancestors practised thrift and saving, strove hard against unfavourable natural conditions and sacrificed themselves freely to gain and to hold what they considered of value. The present generation enjoys a vast heritage: harbours, canals, roads, bridges, buildings of every description, investments in foreign countries and other forms of material wealth; but, perhaps, more valuable than these, it has also inherited that great experience and knowledge of the world which their forefathers gained through much toil and suffering. In special measure, the history of England is contained in original documents, so that it is possible to trace movements in greater detail than in most other, if indeed not in all other, countries. The result is that there are lessons that can be driven home to Englishmen which, though based upon facts within easy reach, appear to others as merely obstinate beliefs. It is true that one great political party, at least, refuses to see the obvious lessons of history and would destroy the very system which has made possible its own existence and the livelihood of its supporters; but when political excitement wanes, the essential truths are recognised and these lessons guide the actions of all in greater or less degree, and serve to maintain a high standard of sanity in affairs of importance. In the Punjab, trustworthy records of any value or age are rare; there is little material for the historian; in consequence, there is not that balance which is secured when refutation of a false argument is certain and quick. It is some such reason as this which accounts for the persistence of common misapprehensions. Ignorance lies at the root of poverty; knowledge gives power to rise. In 1848 the Sikh Kingdom (1) did not possess any metalled roads, or big bridges or any other considerable public work of value. There were inundation canals and the remains of an old one of better type, but generally the great potential wealth of the rivers was running to waste. The present generation of Punjabis inherit very little, beyond wells, from their predecessors. Big productive works were unknown, there were no accumulations of capital yielding annual profits to their owners. Such buildings as existed were mostly for religious or military purposes. In 1848 the Punjab was practically devoid of any form of economic organisation, beyond the hereditary caste system. There were no books of merit on agriculture or other industries; there was

(1) The high rate of interest would prevent any large expenditure on productive works out of borrowed money. It is not sufficiently understood to what extent a high rate retards progress. Many projects would be profitable with money at 4 or 6 per cent., but not at 12 per cent.

nothing to guide the people except the wisdom handed down from mouth to mouth. Such leaders as were recognised were either military or religious; the former were almost exclusively officials of the Sikh regime, and were in no sense qualified to prescribe a programme of economic development; the latter do not seem ever to have used their undoubted influence to persuade their followers to adopt measures designed to promote their material welfare. One of the most striking defects of the present day is the lack of accurate histories of the preceding century. The youth of to-day has before him no detailed descriptions of what life was like before the introduction of railway and canals, of post and telegraph, of impartial justice and internal security. In England, the average man probably derives his knowledge of such conditions from novels dealing with past history and possesses a rough idea of what conditions were like in the old days. In the Punjab, the average young man has little idea of what the country was like 50, 75 or 100 years ago.

Of the precise economic effect of the curious system of occupational tribes or castes, it is difficult to write; but it may be presumed that where a natural aptitude for any work has to be suppressed, because that work is the task of another caste, there must be a great obstacle to progress. In one respect, it is probable that the system serves to maintain the stagnation of agriculture. Extensive cultivation as practised by the agricultural tribes provides little opportunity for the study of plant life in detail. While the cultivation of vegetables and other crops under an intensive system which these require gives to the grower ample education in plant life, in the variations which human care and intelligence can produce, and in the needs of the individual plant. The grower of fine produce, vegetables or root crops, imbibes more knowledge of the details of plant life than one who grows wheat on canal irrigated land. Unfortunately the cultivation of such vegetables and special crops is relegated to a class whom the great tribes affect to despise; the majority of the peasants prefer ignorance of such things; thus they lose the valuable experience and knowledge which might be of such great value in the development of their own art. In England it has been the garden which has shown what could be done in the field; under the Punjab system the field has despised and rejected what the garden could teach.

There is another matter which appears to be the result of the occupational caste system and which deserves to be mentioned, although the view put forward will not escape controversy. The higher castes are not themselves handworkers; they do not, or up till recently did not, take part in the labour of agriculture or of manufactures. As a consequence of this they are apt to

misunderstand the position due to these activities, or regarded as due, by Western thinkers. Prof. Kale, for instance, refers to agriculture as a noble industry, but adds: "To reduce India to the condition of a nation of cultivators would be to retard the progress of the people in all directions. The existence of diverse industries, particularly those that call for the exercise of high intellectual and moral qualities, is essential for the healthy development of the people." (1) By "industries" the Professor apparently means large scale factory industries, and not the numerous hand industries which have existed in India for long centuries; he seems to suggest that there is something in modern factory industries which is not to be found in agriculture and hand industries; and that mechanical power applied to machinery somehow develops higher intellectual and moral qualities. In industrialised countries machinery is regarded as deadening to the best faculties, as condemning the worker to a life of dull routine in which he is deprived of all originality and joy of creation and as tending to the production of a race of automatons instead of vital living human beings. The element of truth, of course, lies in the fact that the increased production of wealth leads to expenditure on numerous aspects of life which in a purely rural country are apt to suffer neglect; it is the wealth and not the factory which facilitates healthy development. No poet has yet placed his arcadia in a factory town. In another work another Professor of Indian Economics writes: "The lesson that history teaches is that so long as a country has remained a predominantly agricultural country, it has remained poor and in a lower stage of civilisation as compared with manufacturing countries. To what does England owe her prosperity? Would the United States have become the wealthiest country in the world if they had not learned to manufacture? What is the cause of the progress and prosperity of Japan during the last half century? Industrialism alone can save India." (2) Here again, there is the same implication detrimental to agriculture. England achieved Empire and greatness before the industrial revolution, and laid the foundation of her future industrial supremacy by generations of thrift, sacrifice and unending struggles with the forces of Nature. The United States earned wealth by the exploitation of vast natural resources; to this day nearly all the States are predominantly agricultural; the industries are for the most part confined to small well-defined areas. Japan is still predominantly agricultural;

(1) Indian Economics, 3rd Edition, p. 148. A curious neglect of the teaching of history. The great moral and religious leaders of the world arose in countries devoid of factory industries. No religion owes its origin to an industrial atmosphere. The wonderful genius of the Elizabethan age was not associated with any industries in the sense in which that word is now used. Poetry and industry, philosophy and industry, are usually regarded as antipathetic.

(2) Essays in Indian Economic Problems, by Professor Brij Narain, p. 39.

her industries are still in the infant stage and can hardly yet be called well established; what progress she has made has been largely due to the determination to cast away all trammels of caste or prejudice that hamper development, to the willing sacrifice of her people and their ready submission to a firm discipline wielded by a strong bureaucracy. Japan has at last reacted against a poverty that was crushing her, but which was mainly due to her previous policy of aloofness and contempt for the West. Japan has not yet solved all her problems. To the views of two leading Indian Economists just quoted there may be contrasted the views of an eminent English one, Dr. Marshall who wrote: If India had a score or two of men like Mr. Tata, and some thousands of men with Japanese interest in realities, with virile contempt for mere speech-making in politics and law courts; and with no scorn for work on things while the mind was full of thoughts, India would soon be a great nation. Nothing could stop her.....But so long as an Indian who has received a high education generally spends his time in cultured ease; or seeks money in Indian law-suits—which are as barren of good to the country as the sand of the seashore—nothing can do her much good. (1)

To regard agriculture as something rather derogatory to a progressive country is to take away a source of wealth. Exalt agriculture, appreciate all that it is capable of becoming in the hands of highly educated men with sufficient capital and enterprise to extract the utmost profit, and there is the seed of a public opinion that may lead to the realisation of the dream. Decry it, and there is another force making for stagnation and poverty. The suggestion is offered that it is this attitude towards the soil adopted by the ancestral leaders of the people that is partly responsible for much of the poverty that now exists. It was certainly the reverse attitude adopted by the ancestral leaders of the English people that set that country on the road to her present high position. (2)

(1) Pigou: *Memoirs of Alfred Marshall*, p. 472.

(2) The importance of leadership in the development of agriculture has already been emphasised. In the absence of a genius as leader, farmers are encouraged to form associations in almost every country; the object of these associations is to stimulate them to adopt improved methods, and to afford facilities to them in doing so.

These associations, under various names, have done great good. Their absence in any country must tend to withhold this advantage, and here again the past history of the province discloses a negative cause of poverty. In the industrial sphere the conditions of competition render such associations unnecessary. A manufacturer with a new idea can exploit it. A farmer with a new idea must persuade his neighbours to adopt it in order that he may find a good market. The special produce of a single farm will not be sufficient to create a good market. The farmer, being an individual producer, cannot go in for mass production.

Even today the gentleman farmer is a valuable experimenter and pioneer of improvements, while the landlords play a prominent part in the organization of associations and shows designed to encourage the best that there is in agriculture, stock-breeding, etc. These associations have done great good in bringing to the notice of farmers new seed, new implements and new fertilisers, and also in showing them what excellent results their neighbours have obtained by adopting new methods and so on. The absence of such associations and shows in the past in this province is another negative factor in poverty and the present efforts to start them and make them popular deserve the support of all who desire to see the Punjab make progress.

In the above the discussion has strayed into conjecture, and the argument may be brought to more solid earth by pointing out the waste that results from a diet that is prescribed by custom, religion or prejudice, rather than by strict economic considerations. In the West poverty has fixed the diet of the people, with the result that the general scale is far lower than is commonly supposed in this province. It is obvious that, given a definite area, a diet that can be grown on the smaller share will set free a larger one for crops that can be exchanged for other commodities; wheat will give ten or twelve maunds on an area that will yield one hundred maunds of potatoes; so that the replacement of wheat by potatoes will set free much land for money crops. In South Europe the diet of the ordinary people would astonish those who regard that of the Punjab peasant as something unusually poor. In England, the mass of the population cannot afford butter at all and eat margarine, made from the coconut obtained from South India and Ceylon; their portion of meat is small, and it is comparatively recently that pure wheat flour has become general. In Egypt, although there is scarcely a household which does not have rice as part of its daily menu, very little of the locally produced rice is consumed in the country and most of the rice in demand among the Egyptians comes from Rangoon. The explanation is purely financial. They have found that they can import rice from Rangoon at a much lower rate than they can obtain by exporting their own rice to the adjacent Ottoman Dominions. Similarly, the Italian peasant sells his superior wheat because he cannot afford to eat it, and consumes inferior wheat, rye, barley and maize. (1) The German eats cabbage and the American maize not because they have a natural taste for these

(1) His consumption of wheat-flour is estimated at one-third of a seer a day. His total consumption of cereals is much below that of a prisoner in a Punjab jail. His consumption of olive oil (six seers a year) is exactly the same as the scale of mustard oil in the jails here.

things, but because these things have been forced upon them by economic conditions, and ingenuity has enabled them to serve these articles up in a palatable form.

The dependence of the Irish upon potatoes was, similarly, not a matter of choice, but of poverty. Olive oil in South Europe takes the place of ghi in the Punjab for cooking; in all probability the people would much prefer ghi, but they cannot afford it. A broad survey of the diet of the mass of the people in any country indicates that it involves the use of less area per head than is needed in this province. Poverty has dictated the food to a greater extent than appears to be the case here, where the people seem to have responded to hard times by reducing the quantity consumed, rather than by altering the articles consumed. In the last twenty years, there would appear to have been a marked increase in the consumption of wheat and a decrease in the consumption of the cheaper millets; and one of the causes of the scarcity of ghi is the greater demand from persons who formerly could not afford to consume it. Another is that the tenants who formerly sold their ghi now keep it for themselves. There is an idea abroad that an improvement in the diet of the mass of the people is a good which should be aimed at for itself. From the economic point of view this is not correct. A more expensive diet is an economic loss unless it results in the production of a greater amount of wealth than is lost in the extra consumption. Peasants in Denmark and Holland will sell their better class butter and their fresh eggs to the big industrial centres of England and Germany, and will consume less valuable butter and eggs from Siberia. By this means they save a considerable sum without any perceptible diminution of efficiency. If the diet of the Punjab peasant or townsman were made richer and more expensive, without the extra energy of the food appearing in extra work or more efficient labour, then there would be a serious loss, although there might, and probably for a short time would, be more pleasure and enjoyment. In point of fact, it is probable that a richer diet will be necessary if the greater exertion needed for economic progress is to be forthcoming; but this is more likely to take the form of meat, vegetables and potatoes than of more milk and ghi. The latter are very valuable articles, but the idea that they are necessities is refuted by the example of Japan where they are beyond the reach of the mass of the people, and by Burma and Ceylon whose people do not like milk. Those who say that these commodities are necessities under the conditions of India are stating not a physiological, but a religious doctrine. Many Indians scoff at the idea of the potato becoming a common article of diet; they are 150 years behind the times.

In Europe there was the same prejudice ; this article was at first thought to be suitable for the poor, but the peasants disliked growing it and the poor could not be induced to eat it ; Arthur Young found that in France the people would not touch it ; yet now it is almost impossible to realise that until almost the end of the eighteenth century the food problem of Europe had to be faced without this valuable tuber. (1) In Germany the potato had been making headway long before 1800 . . . it had made more progress in Germany than in France before 1815. Prejudice against it is said to have died out so early as 1770 in consequence of a period of dearth. (2)

The fact is clear that the diet of Europe has been dictated by poverty to a far larger extent than in this province, and that no country in Europe could afford to live on the scale which is here advocated as necessary. Take away the potato from the West and starvation appears as night follows the day. Let the potato become a common and everyday article of consumption in the Punjab and there will be food for all and a vast saving of land for other purposes. The European has become so used to this particular article of food that deprivation is now a hardship ; the present prejudice will give way before familiarity as it yielded in England, France and Germany to poverty. The world being constituted as it is, it is worse than useless to fight against the adoption of the most important vegetable article of food known to man.

There is waste in the heavy mortality amongst cattle ; much of this is preventible, but here again religious feelings interfere in the application of scientific knowledge. Amidst the wild talk of the loss from export and slaughter, there is silence concerning the immeasurably greater loss imposed upon the people by religious sentiment and their own ignorance. Although the census returns show an increase in the number of cows and bullocks, including young stock, from about seven millions in 1872-73 to over twelve millions at the present time, there are still to be found those who assert that export and slaughter, both completely negligible items, are responsible for a *decrease*. Economic progress can only result from a resolute facing of facts, and nothing but disaster can follow misrepresentation of this type.

To sum up the argument, it may be stated that the main causes of the poverty of the Punjab are to be found in the history of the province. It should be sufficiently obvious that, if the

(1) *Economic Development of France and Germany, 1815-1914* by J. H. Clappam, p. 22.

(2) *Ibid*, p. 51.

mass of the people in any country are poor, it must be because they are not doing what is necessary to make them rich; they are not using the factors of wealth in sufficient degree. From this it follows that what they are doing must be economically defective; and so any inquirer must, if he is honest, catalogue a series of faults, omissions and defects.

Chief amongst all faults and defects is the absence of what Mr. Moreland calls the Will to live Better, the determination to improve the human lot by human labour. There is probably not a cultivator in the province who does not realise that he could get better yields by working harder on his land; yet he remains satisfied with the smaller return his customary exertion brings. It has been said that whereas the ambition of the man in the West is to acquire comfort and amusement, that of the East is to acquire dignity and leisure (1); and there is much truth in this. The Indian prefers to repress his wants rather than exert himself to satisfy them. It is the intense desire for more material comfort that is the moving force to increasing wealth. A people who do not want material things and who believe in stifling human desire will never have great industries, and will always be poor.

There has been no systematic thrift resulting in the accumulation of vast wealth, such as is now found in the North-West of Europe. Such leaders as have arisen have been concerned with dynastic or religious matters, rather than with problems of increasing production. The general sentiments of the people have not run in favour of the steady accumulation of wealth; on the other hand, they have been directed to the condemning of mere material welfare and the exaltation of things spiritual. Even now a mendicant excites more respect than an efficient artisan; and thousands will listen to a policy of destruction who would remain unmoved by the advocacy of harder work and more efficient labour and skill as a panacea for common ills. The attitude of the people is still not towards material things. Further, and connected with this, there is too much reliance upon a Higher Power and too little reliance upon individual effort in struggling along the lines fixed by that Higher Power. Government or God is expected to make good all the deficiencies of the people. Until it is absolutely burnt into the minds of every one that his economic position is mainly his own fault, there can be little improvement. The spirit of self-help must be nursed into a position of dominance.

To this it is, unfortunately, true that the Indian can reply by pointing to the Socialist Party in England who advocate

(1) Knowles: *Economic Development of the Overseas Empire 1763-1914*, p. 255.

greater dependence on State control of everything and greater reliance upon government to provide everything. Such a policy could only lead to poverty in England whose wealth is the result of self-help and intense individual effort and hardly at all of government action.

There being no savings inherited from generations gone by, there is no capital earning incomes for the present. In the absence of capital there is wanting the development of the ingenuity to use it to the best purposes. Intelligent direction of large sums has had no chance to grow.

The agriculture of the world stood still for centuries, until the great landlords of England turned their attention to its improvement. In some ways the peasants of Holland (1) led the advance, but many new ideas were due to a few Englishmen, even if the original stimulus came from knowledge of what was being done across the narrow sea. Later, the discovery of the close connection between chemistry and agriculture led to a revolution in the use of manures and other changes of great importance. Animal husbandry has for centuries been the object of study, and with the advance of knowledge of the science of breeding the British Isles became the great source of pure-bred stock. In this line countries, such as Denmark and Holland, seem to have made more rapid progress recently; but the more Southern portions of Europe seem less well adapted for high-grade stock-breeding. The States bordering on the Mediterranean and apparently all Asia and Africa, were left untouched by the great strides being made in their main industry; there does not seem to be any trace of a knowledge of the principles of stock-breeding in the Punjab; while the sentiments of the people are opposed to their practical application.

For reasons chiefly political, the province has lacked capital, intelligence and skill; it has lacked the factors essential to the increase of wealth.

The small holding is not of itself a cause of poverty, the holding is not put to the most profitable use. The stimulus to make the most of the soil has not been present. A cultivator will not grow more than he can sell or use; he will not sow more than he can reap, and, having reaped, find some use for. Situated as it is, there could be no market for the surplus of the Punjab except in the uncommon case of a shortage in a neighbouring area; without an assured market, there would be no

(1) In the seventeenth century "the Flemings and Hollanders were the teachers of the new agriculture. They adopted the artificial grasses, and cultivated winter roots in the fields long before their neighbours adopted either of these capital discoveries.....Not only were they the pioneers of progress in agriculture, but in finance; in commerce and in banking." Thorold Rogers, Vol. V., pp. 64-5.

object in expanding cultivation. Centuries of this experience have left habits which half a century of other conditions has not yet sufficed to change.

Everywhere man, unaided by capital, power or special knowledge, can produce little more than he consumes. Until production exceeds consumption, there can be no increase of wealth. There is no stimulus to increase wealth until there are amenities to be obtained and enjoyed from its expenditure. Until the province was opened up by railways and roads, and until security of life and property was maintained, there was little on which surplus earnings could be expended. The people, as a whole, have not made the search after wealth their aim in life. The prevailing religious beliefs have prevented the attainment of the atmosphere in which the economic sense grows up; in some respects they are responsible for the poverty of the people; and to a serious extent they threaten to prevent full advantage being derived from modern scientific knowledge on such subjects as the improvement of cattle. The occupational caste system seems to have operated to prevent the growth of those subsidiary cottage industries which are found almost everywhere else. The German and Russian peasants make toys and wooden articles in their spare time; the English produce honey, poultry, fruit, baskets, etc.; and similar activities are found in almost every country. The Indian peasant appears to be the only instance of a small holder trying to live upon the plant products of his holding, and efforts to induce him to imitate his fellows have not yet achieved any measurable success. It is probable that the traditional place allotted to the cultivators in the Hindu hierarchy has tended to retard the growth of a more progressive agriculture. A rough survey of rural conditions suggests that there are few problems here that have not their counterpart in other countries; and the common reasons for local ills are generally easily refuted by the existence of the same ills where the reasons alleged do not exist.

For all this, the essential remedy is a close study of Rural Economics; the collected and tested experience of the world must be drawn upon to aid Government in its task of stimulating the more rapid development of the resources of the province. Public opinion needs to be guided towards a more intelligent realisation of the potentialities of modern agriculture, and to a better idea of its position and influence in regard to the possibilities of establishing industries.

The attempt to foretell the future is seldom profitable; but it may be hazarded that ignorance of these matters will retard progress and may lead to disaster and waste.

In the foregoing pages stress has been laid upon waste as

the main cause of poverty ; it is not necessary now to repeat the tale of the loss suffered by the destructive forces of competing dynasties or of the anarchy and confusion which from time to time have spread throughout the province. The geographical position of the Punjab has exposed it in special degree to the ravages of invaders and the spoliation of retreating hordes. Prior to 1848, there did not exist the conditions under which orderly progress towards a higher standard of life could alone be found. These, however, are matters of history ; they explain the present ; they must not be overlooked in any examination of the causes of poverty, but they need not be over-emphasised when the time comes to discuss the prospects for the future.

It must not be understood that India is unique in her stagnation ; English agriculture made no general advance for 500 years prior to 1800 and this has been ascribed to the existence of waste common land, the open field system of farming, the reluctance of tenants to risk capital on improvements when they had no security of tenure or of compensation, the poverty and ignorance of most farmers, the obstinacy of traditional practices, the want of markets and difficulties of communication—all to be found in the Punjab to-day. (1)

The influence of caste in retarding industrial development is a subject too delicate for detailed investigation in this book. Leading Indians have expressed quite clearly all that needs to be borne in mind. Current history shows clearly that industrial progress is only possible with a loosening of the ties which bind a man to an ancestral occupation, or group of occupations. If the province is ever to see great industries achieving prosperity its people will have to accept the principle that natural aptitudes must be allowed to find their natural bent, irrespective of ancient bonds.

The agricultural produce of an average year has been estimated at Rs. 100 crores. Of this sum, it has been pointed out that fully 12 crores goes to the money-lender ; part of this is not profit at all, but compensation for bad debts resulting from a radically faulty system of credit ; to this extent there is dead loss to the province. Some four crores may be taken to represent the economic loss due to litigation. Between three and four crores may be assumed as the loss resulting from cattle mortality that is preventible, and which could be saved by a greater willingness to adopt modern scientific methods of prevention and cure. Besides the 59,000 money-lenders with which the province is burdened, there are nearly one million people supported by petty trading. The number of small shops is excessive, with

(1) Lord Ernle : *English Agriculture, Past and Present*, p. 195.

the result that there is not a decent living for all engaged. There are some 200,000 workers in the small *nun tel* shops of the villages. The waste of human labour here is great, and yet there is little tendency towards the multiple store. The figure suggests the amount of intelligence wasted which should be diverted to industrial pursuits where skill is required. The number engaged in selling cloth nearly doubled in ten years. Apart from these, there are over 158,000 persons supported by gold and silversmiths' work. Amongst these, if it is to be assumed that 32,000 are adult males earning somewhere about one rupee a day, then the cost to the province is over a crore a year. It is through the agency of these that the hoarding of the precious metals takes place, and the net loss resulting from their activities must be very great indeed. The Sunars are skilled artisans, whose energies might well find more productive scope in industries of a more valuable type; as it is, they are instruments of waste. It is unnecessary to continue the catalogue further; everywhere there is waste—waste of intelligence, of skill, of human labour, of capital and of energy. If the education, the intelligence, the skill, the labour, the capital and the great resources of the province could be utilised to the full in the production of wealth, there would be no longer occasion to deplore the poverty of the Punjab.

What is required now is the steady consideration by the best brains in the country of ways and means by which the uneconomic elements in the agricultural system can be eliminated.

Agri: Produce 100 crores.

12 crores = moneylender.

4 " litigation

4 = cattle mortality

CHAPTER XIX.

PROTECTION OR FREE TRADE ?

The coming of tariffs in India—Economic Nationalism—India's position in international trade—and under Free Trade—The desire for industries—and for protection as a policy—The protection of agriculture in Europe—Agriculture versus Industries in the United States—and in Australia—the case of Burma—Protection in India—steel—cotton cloth—case for the Punjab—and its small holders—effects of protection in the Punjab—possible repercussions.

When the first edition of this book appeared in 1922, there was considerable discussion as to whether India should not embark upon a policy of protection ; as there were few industries which would benefit from such a policy and as the demand was more for State aid to possible industrial expansion than for assistance to established industries, the discussion was necessarily theoretical. The war had given an impetus to the starting of industries to fill the gap caused by the belligerent Powers being engaged in making munitions, and India had made considerable strides in some directions. The war had also had the curious effect of a general decrying of international trade and of an advocacy of industrial self-sufficiency ; these tendencies developed into a more or less popular lauding of what has been termed "economic nationalism," that is to say, the ideal that every nation should be independent of all other nations for the needs of its people. The doctrine has gained extraordinary vogue and has been one of the prime causes of the depression and even more of the slowness of recovery. Climate, geographical position and natural resources, mineral and living, have combined to give to each country special aptitudes or fitness for the production of various commodities ; and in a world of free commerce each country would produce those things for which it was best fitted, and would produce them cheaper than any other country could.

But economic nationalism ignores natural aptitudes and economic advantages and would have each country producing everything its people consumed at whatever cost, whether that country was well or ill-adapted by nature for the task. Its basic fallacy lay in the idea that trade was bad, that interchange of commodities between nations was somehow harmful to both and

that somehow or other a country's resources would be as profitably employed in producing commodities they were ill-adapted to produce as they would be in turning out goods for which they were specially well fitted. Further, it ignored the obvious truism that international trade is based upon free exchange of goods, services and loans of approximately equal value, and assumed that a country could somehow gain by selling goods without taking payment for them. Curiously enough, this doctrine that it profits a country to export goods without taking payment in any form is most popular in the United States; it also lies at the root of most arguments in favour of protection advanced by Indian writers and politicians.

The simplest way of stating the facts of international trade is to say that goods, services and loans from one country equal goods, services and loans into that country; or that if any country is exporting goods, services or loans, it can only take payment in goods, services or loans in return, there being no other method, beyond a supply of gold so small as to be a mere fraction of the world's volume of trade.

India is not in a position to lend money to any other country; further she lacks the capacity and resources to render to any other country services of great value; therefore she must pay in goods exported for whatever goods, services or loans she needs. For many schemes of development she still requires loans and can raise them at the cheapest rate in London; she still requires services of various kinds, such as sea transport, insurance, payment of interest on debt, and the pensions of her officers retired outside her boundaries. For all that she requires India can pay in one and only one form and that is goods, and owing to the geographical and climatic conditions of the country the goods available for this work are mostly agricultural produce, such as jute, wheat, rice, oilseeds and cotton. She has no great mineral wealth to support a large export trade (though what she has is valuable) and has not yet found a considerable market abroad for her manufactured goods. It is true that in recent years she has been a large exporter of gold, but this is not from new production but from old stores, and so is not a permanent feature. The fact that India is practically confined, when paying for goods, services and loans, to the export of agricultural produce, is of supreme importance in the discussion as to whether she should adopt a policy of protection or adhere to free trade.

It has been shown elsewhere that the great increase of wealth and the advancement in prosperity which India has enjoyed in the last seventy years has been chiefly due to the linking up of her fields with the great markets of the world whereby her produce has been able to win a far higher price than ever previously in her

history. That there has been an enormous increase of commerce is beyond dispute, and this has been achieved on a basis of free trade. Indeed, the main efforts of the Government of India from 1860 to 1920 were directed to remove all obstacles to commerce and to provide all facilities within its power. The result is obvious to everybody. Before the war, India levied either no customs duties at all or small ones of from two to five per cent. In the days of her poverty, there seems never to have been any question as to the benefit to India of the freest possible flow of commodities both internally and overseas.

There is not and never has been any great volume of opinion in favour of protection for her chief industry of agriculture, and the demand which has lately sprung up for high tariffs has curiously enough been almost entirely confined to protection as a vague ideal with little application to any special industries. As has been stated in a previous chapter, India's leading economists have pictured agriculture as a mark of a backward country, of a country lacking in the finer moral and intellectual qualities, and so have voiced a desire that the slur should be removed by the artificial stimulation of industries without any attempt to indicate which would be most suitable as economic successes or as nurseries of culture.

On the other hand, Government has for decades past regarded the expansion of industries as essential to relieve the pressure on the soil, to provide a diversity of occupations and to mitigate the extreme dependence of India's welfare on the precarious vagaries of the monsoon. It is an unfortunate fact that between 1880, when there was a clear declaration in favour of stimulating industries, to the beginning of the war the expansion of industries did not keep pace with the rising ambitions of Indian capitalists and publicists, and these ascribed their disappointment not to lack of enterprise on the side of themselves or their friends but to the apathy of Government. There was a feeling that Government should do something and in the absence of more specific proposals as to the form this something should take, the idea of protection obtained a certain amount of popularity, until most Indian writers had declared for the new policy.

The demand for protection, when critically examined, is difficult to explain. India is one of the greatest free trade areas in the world; her emergence from poverty and chaos to the comparative prosperity and increasing wealth of a great producing and commercial country has been due to the freeing of trade from all restrictions, natural and artificial, which could be removed by Government action; the demand did not come from her greatest industry of agriculture nor from any of her numerous handicrafts, nor from any of those who were engaged in preparing

her produce for export nor from that great commercial class which had risen to wealth and power between 1860 and 1920. In the main it was not a demand for the protection of any industries already in existence, but for the creation of conditions favourable to the initiation and development of industries where none had ever existed on a large scale factory basis. In short the demand was not for the protection of industries at all, but for the elimination of rivals in case any future industries could be started. The Industrial Commission heard volumes of evidence as did also the Fiscal Commission, but both failed to discover any concrete case of industries which could be developed on a profitable basis with the assistance of a protective tariff.

The years that have elapsed since these Commissions reported have amply illustrated the argument stated in the first edition of this book that there was no demand for protection for industries at all, but only a demand for high duties in the hope that industries might spring up in the future. It was this vagueness about the possibility of industries that may account for the most peculiar feature of the whole discussion for every single writer on the subject was a convinced, indeed a fervent, believer in free trade within the huge area known as India.

There is then the remarkable fact that the demand for protection arose and found its support amongst people who would reject at once with contumely any suggestion that there should be in India protection such as is found in Europe where every State, however small, sets up barriers against its neighbours. The only precedent comparable in area for this seems to be in the United States of America, but before examining conditions there, it seems necessary to make clear what protection is and means. On a smaller scale, Canada, Australia and Germany offer similar cases. No Indian writer known to the author has stated the case for an agricultural country, and it is hoped that there will be ready excuse for an attempt to explain as clearly as possible what protection has meant in the past and means now to a province or State like the Punjab.

Originally "protection" meant the protection of agriculture, and in most States of the world it still means this. In England, the whole discussion about protection centred round the corn laws, which were measures designed at different times to restrict export when the price of corn rose high and to subsidise export when the price indicated that there was an unwanted surplus in the land. How far these measures succeeded or failed is outside the present discussion; briefly they led to such unending agitation, allegations of corruption and trickery, and political difficulties that there was general relief when at last they were abandoned. For hundreds of years England had tried to maintain

agricultural prosperity by tinkering with the trade in wheat and even now there is nowhere anything but doubt as to whether they succeeded. All gloomy forebodings as to the evils which would follow their repeal were falsified by experience, prices did not fall and agriculture and the nation did not suffer. On the contrary, the farmers expecting disaster had tried to ward it off by reducing their costs of production, by resort to drainage, artificial manures and improved implements. The liberation of trade by the removal of duties led to considerable industrial expansion and a great improvement in the lot of the poor; the increasing prosperity of the latter led to a greater demand for farm products and the development of the home market. As the working classes earned more wages so they were able to pay for more and better food, and this in turn stimulated the production of eggs, poultry, butter and vegetables as well as of meat. The new demand for agricultural produce brought in response from the farmers a willing effort to meet the supply.⁽¹⁾ Contrary to the expectations of many, English agriculture flourished when protection was removed.

On the continent of Europe, the basic industry of agriculture was threatened towards the end of last century by the large imports of wheat from America and Russia. Britain refused to be drawn once more into the mire of protection; Belgium hesitated with a low tariff, Denmark and Holland remained free trade. All the rest sought refuge in protective measures. Germany concentrated on her peasantry and determined to make their prosperity the first concern of government; as a matter of deliberate policy she decided to support her agriculture even if its protection involved some loss to industry; she was willing to sacrifice the progress of industrial expansion in order to keep the peasants on the land in peace and contentment. To Indian readers this is of special importance, as an example of how an enlightened nation regarded the problem of industries *versus* agriculture. Germany's greatest industry was agriculture and even her great industrial leaders had to bide their time when that was in danger. Her protective measures were supplemented by a great expansion of the co-operative movement amongst farmers, and the great benefits gained by this went far to enable the farmers to struggle against foreign competition.

In France, as in Germany, the threat to the prosperity of agriculture was met by protection and co-operation, the former providing relief from the worst rigours of foreign imports of wheat, the latter enabling the farmers to maintain the prosperity of their industry. In both cases, the action taken was successful

(1) C. F. Levy: *Large and Small Holdings*. Also *Agricultural Tribunal of Investigation*.

in keeping the peasants on the land, the claims of industry being subordinated to the greater need.

The one country that faced its difficulties without resort to protective measures was Denmark; there the co-operative movement was developed to a pitch of perfection that enabled the farming class to meet competition from abroad. To a less extent Holland and Belgium, as already stated, avoided high tariffs; in both cases co-operation was encouraged amongst the farmers to the greatest extent practicable.

Of Ireland, a country struggling like India to create a diversity of occupations through the expansion of industries it will probably be sufficient to quote from the *Irish Economist* (1): "The staple industry of Ireland is, and is likely to remain, agriculture. Anything which injures agriculture is injurious to the country as a whole. By no possible reasoning can it be shown that protection is likely to benefit agriculture, and any conceivable form of protection is certain to injure agriculture."

Sufficient has been said to indicate that protection originally meant protection of agriculture and not of industries and that when the interests of the two diverged, Governments had no hesitation in placing the interests of agriculture first and foremost. In the United States of America, however, protection came, as it is coming in India and as it came in Germany and Australia, from the need of a federal government to raise funds for its various purposes.

In all four, the federated states have need of all their own resources and object to contribute to the centre which is thus driven to resort to tariffs as its main source of revenue.

The only instance from which, even at first sight, the advocates of protection for India can draw support is the United States of America, and it will be seen that this, so far from providing support, presents to India a grave warning. As already stated tariffs were originally adopted in the United States owing to the difficulties of a federal government in obtaining revenues by contributions from the constituent States; as the country was a huge tract of fertile land coming rapidly under cultivation there was little need to protect agriculture and there does not appear to have ever been any benefit derived from the tariff on agricultural produce. But when industrialists are preparing a measure of protection for their own interests it may serve a useful purpose to pretend to be equally concerned with the interests of agriculture and to propose equal rates of duty. Actually, of course, the great object of American protection has been the expansion of her new but rapidly developing industries;

(1) Vol. VIII—No. 1. *Protection or Free Trade for Irish Industries*; an article well worth study by Indian supporters of protection for India.

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In the competition for foreign bills the manufacturer beats the farmer, and it is the farmer who loses his market under competitive terms. The manufacturer has to pay more for his raw material, labour and other costs of production under protection than under free trade but he can recoup himself from the higher prices he is able to charge for his goods. The farmer, lacking organisation, has to bear the additional costs of production without being able to recoup himself by charging higher prices. The result, now a matter for serious concern, is the decline in American agriculture and the restriction of the area under crops. In addition there has been a disastrous failure in rural credit

following the decline in values of land and its produce. How serious the situation has become is clear from the number of Bills and other proposals being put forward to improve the farmers' lot, some proposing to foster export by granting bounties, some propose that Government should buy up the surplus produce, sell it abroad and pay for the loss by taxation and the latter even takes the form of a proposal for an export corporation which should withdraw from the internal markets all surplus produce and all such produce whose presence tends to force down prices. The Corporation would try to recoup its expenditure by selling abroad what it could before coming on the taxpayer to cover the balance.(1) The idea of farmers growing crops destined to be bought in by government and practically thrown away at the cost of the taxpayer could only be found in a country so completely protection made as the United States. The main lesson for the Punjab here is that protection for industries can only bring harm to agriculture; it has taken the United States many years to learn it, and it is still doubtful whether she will gather wisdom from it. The collapse of farm prices, land values, investments, and so on has been nothing less than a huge disaster and it has been the natural result of a policy of high tariffs in favour of industries. In Germany and France, as has been described, the same fate has been avoided by the deliberate acceptance of the paramount position of agriculture as against industries.

The next country of great interest to the Punjab is Australia; in that immense tract the population is very largely concentrated in a few towns in the south-east, indeed half the people live on the south-east sea-board, and the other half is spread over vast tracts of pastoral and agricultural land. The immediate result is the dominance of political life by urban-minded people. In 1901 the various States were federated into the Commonwealth of Australia, and to the central government was allotted, as a means of raising revenue, the power to impose tariffs. In the following years the tendency of the federal government went more and more towards the protection of industries at the expense of agriculture, and the fact that such industries as there were, were concentrated in one small portion only of the vast continent did not convey to the protectionists any idea of the incongruity of their policy. The farmers found themselves facing costs of production largely increased by the heavy tariffs while they had to sell their produce in the competitive markets of the world. For while the manufacturers trusted chiefly to the protected home market for the sale of their goods, the farmers produced more wheat and wool than was required at home and had to find markets abroad where their

(1) Cf., among other sources, *The Report of the Business Men's Commission*.

*Example
of U.S.A. -
Protection of Burma.*

produce was not protected. The result deserves to be widely understood, especially in provinces which have as yet no great industries protected. Western Australia finds that she has to pay for protection of eastern industries without deriving any advantage from them, while she receives no federal help in the marketing of her surplus wheat and wool. The parallel with India goes a little further. In Australia the import of sugar is prohibited in order to secure a market for the product of a factory in the extreme east; all Australia has to pay much more for its sugar just as all India has to pay more for its iron and steel in order to benefit a single factory in Bihar, or more for its cloth just to benefit shareholders in factories in a few towns, mostly in one province. In the United States, similar attempts by the urban-minded industrialists led to the great Civil War following upon the attempt of the agricultural states to secede from the federation. In Australia the huge province of Western Australia has petitioned His Majesty the King for permission to secede from the federation. Her agriculture is being ruined by industrial protection and her only salvation, in the opinion of her leaders, lies in secession.

In British India, since the central government abandoned its policy of encouraging commerce by freeing it from every hindrance and began the reverse process of imposing obstacles itself, one State, Burma, has been able to prove that she has been the victim of a policy which may help others but which only penalises her. Burma has protested again and again at being compelled to pay more for steel and cloth just to please a few shareholders in another province and her late Governor while expressing his view that federation was good for India was at pains to explain that it would be bad for Burma. In the result, Burma is to secure what the Southern States of America failed to win by war, and what Western Australia seems fated to lose by peaceful means. In the foreshadowed federation of Indian provinces and States, the future secession of Burma is to be forestalled by its immediate exclusion, and she will escape the ruinous consequences of the protection policy of Indian leaders. There can be little doubt that if the facts were only better known all the agricultural provinces of India like the Punjab would likewise claim exclusion from an urban dominated federation.

In Australia, the concentration of the population in a small industrial area in the south-east gives control in the federal parliament to the representatives of one corner of the continent and these are deaf to the arguments that the rural people bear all the burdens of protection without reaping any of its advantages. It is to be feared that in India the caste fellows of the small

industrial population will blindly vote for protection in spite of the clearest proofs that the provinces they represent have no industries to protect or at any rate no industries benefiting from protection and therefore, like Western Australia, are paying for others while gaining nothing in exchange.

The first "industry" to receive protection in India was that of iron and steel; there was but one single company manufacturing these commodities and its shareholders were but a tiny fraction of a vast population, yet under pressure the Government of India introduced a Bill to provide both protection and bounties to this one single company. The spokesman of the Government admitted that had the rural population been better represented in the Assembly there would have been little chance of its being enacted, as it was the Bill became law. Later, when further assistance was asked for, the official spokesman frankly admitted the great burden that was being placed upon the people by protective legislation. In addition to the import duty government agreed, with the prior approval of the Assembly, to give to the company bounties which amounted to over one and a half crores of rupees (about £1,350,000). Originally, as is not unusual, it was intended to give protection for the short period of five years only, but that has long ago been forgotten. How any reasonable person could find on economic grounds any sound arguments in favour of penalising hundreds of millions of people to favour one single company, which means of course its few shareholders, passes comprehension; in fact there was little or no attempt to support the proposal on economic grounds. The chief argument which influenced many to agree was the sentiment in favour of an Indian industry; the company in question has constructed a great steel works which may well excite the pride of those who visit it, and it would seem that it found favour not on its merits, but as a forerunner of what was hoped would be an industrial era for India.

The other large industry that should be mentioned is the manufacture of cotton cloth, mainly in Bombay and Ahmedabad. This industry was founded and flourished under free trade and even in spite of an excise duty that need not be defended. Its early effort to secure protection having failed, there followed Mr. Gandhi's famous boycott of foreign cloth which the official chronicler admits was largely financed by certain Bombay mill interests; for some time, so says the Administration Report, about half the expenses for this campaign came from Bombay.

How far the boycott and its consequent disturbances affected the issue is outside the scope of this book, but protection has now been afforded to the industry. Here, again, the industry is practically confined to a few places in a great sub-continent,

and the whole of the people, some hundreds of millions, are made to suffer in higher prices for their cloth in order that these few places and the mill shareholders may benefit. It is not denied that others benefit besides the millowners, that many factory workers obtain their livelihood and many subordinates good wages from the industry; the point is whether on balance India gains or loses, and on this there is no room whatsoever for any difference of opinion. The tendency of Indian protection is to take from the rural workers, cultivators, village artisans and unskilled labour higher prices for various articles of their normal use in order that a small fraction may gain. Neither on economic nor on moral grounds can there be any justification for this, but sentiment is a powerful factor in Indian politics, and representatives from the towns in provinces which suffer much and gain nothing are found voting for the duties.

The issue should be clear from the illustrations given: Germany and France deliberately protecting their main industry of agriculture even at the cost of delaying industrial expansion; England, Belgium, Holland and Denmark avoiding the artificial stimulation of industries at the expense of agriculture; the United States first divided in civil war by the clash of industrial interests against those of the rural people and then proceeding to bring about an agricultural collapse by the selfish dominance of manufacturers; Western Australia finding herself offered as a sacrifice to please a few manufacturers in one corner of the continent now pleading for the right to secede from the Federation; Burma proving the danger to her rural interests from the protectionist policy of India and winning the right to be separated from the proposed Federation, and now whole provinces of India, of which the Punjab is one, placed under levy of high duties in order that a few mills in one or two places in the great sub-continent may flourish. As has been stated, the parallel goes further, because it was the difficulties of financing a Federation that led to protective duties and tariffs generally in Germany, the United States and Australia and which is leading to a great expansion on these same burdens on trade in India. How great is the burden few seem to realise; before the war the import duties were low, being from three to five per cent. Since 1916 they have been steadily increased until about 30 crores of rupees of additional taxation are now collected from trade, bringing the total to over fifty crores.

The case for the Punjab seems to be clear enough; its geographical position, far from the sea and navigable rivers, and its lack of coal and iron will prevent it from ever becoming a great industrial province supplying markets outside its boundaries; such prospect for industries as it seems to have takes the form of

working up its raw material into more marketable shape, such as the ginning of cotton or the pressing of oil-seeds, which need no protection.

Even the most optimistic enthusiast of Punjab industries must admit that they can provide employment for but a small fraction of its people, and therefore that agriculture will and must remain its dominant interest. Further there seems to be agreement that even where protection may be devised to benefit agriculture, it will fail where the land is cultivated by tenants and where the holdings are small. Any measure that served artificially to raise the price of Punjab produce would benefit the landlords receiving share rents, it would leave little for the tenant. The small holder, whether owner or tenant, can gain little as he pays more for everything he has to buy and only gains on the small portion of his produce which he can sell; all his costs of production are increased, but as he consumes most of what he grows the opportunity to recoup himself by selling at a higher price is small.⁽¹⁾ As half the Punjab is cultivated by tenants and as the great proportion of her landholders have less than ten acres it should be clear that even a tariff designed to benefit agriculture would hardly help them to any appreciable extent. But every cultivator uses steel for his plough, his sickle and his hoe, and every cultivator uses cotton cloth and so all have to bear the brunt of protection of industries.

The case is, unfortunately, much worse than this; for as has been explained India can only pay for the imports, the loans and the services she requires in agricultural produce, and all burdens placed upon trade, such as import duties impede the free flow of commerce. To the Punjab it is of great importance that there should be a free market for such wheat, cotton, oil-seeds or other goods as she can produce and she can only lose by protective duties; a striking example was the reaction of Japan to a heavy tariff on her cotton cloth, when Japan decided to abandon the Indian cotton market as a source of her raw material with the result that the price of cotton to the growers fell. Lancashire similarly can hardly be expected to buy the Punjab-American cotton if she is not allowed to import into India her cotton goods. By no power of reason can it be shown that the Punjab can do anything but lose by the present policy of protection.

It should be clear that the author, while desiring the development of every possible industry that can flourish within the province by fair means, desires to make plain to all devoted well-wishers of the Punjab the evil consequences that must inevitably ensue from the present policy of the Central Government.

(1) Cf. Prof. MacGregor in the *Agricultural Tribunal of Investigation*.

There are numerous industries open to her capitalists which should flourish under capable management under conditions of free trade, such as cotton ginning, pressing and baling, oil-seed pressing and its numerous subsidiaries, flour mills, rice-hulling, tanning and leather work generally, while there is obvious scope for improving the numerous cottage industries which exist in every village, the manufacture of agricultural implements of all sorts, of saddlery, potteries, and quite a large number of others. In all agricultural countries and in the agricultural counties of England there are numerous such industries based upon agricultural produce or agricultural needs, and as the wealth of the province increases there will arise demands for more and yet more "wants" which enterprise will supply. In the case of all these there is little or no competition from abroad and therefore no need for protection; what is wanted is foresight, knowledge, enterprise, efficient management and capitalists willing to lose on one venture to gain on the next. Once the organisation of Punjab industries begins to take shape there will arise numerous other industries designed to supply the needs of the first; for just as agriculture requires and maintains an army of workers in iron, carpentry, leather, pottery, stock-breeding, as well as a huge railway system with all its own subsidiary industries, so will the organisation of these separate industries lead to the building up of other great works. It is one of the curious facts of this problem of protection for industries with its constant decrying of the importance of agriculture that the greatest single manufactory in the province, the railway workshops, is maintained as a subsidiary to agriculture, while another, the canal workshops, is similarly dependent upon the occupation which is held up to urban contempt.

But the full tale of what an agricultural province suffers from the partial protection which is found in India is not yet told. It has been mentioned that for the first few years a large bounty was paid to the steel company; since then government has purchased large quantities of steel rails at protected prices. What the extra cost to the railway system from purchasing from Tatas' works as compared with the price that would have been paid for rails imported free of duty from England or Belgium has not been made public, but it represents a further bounty to the company and a further burden on trade. The long distances over which goods have to be carried in India render it exceedingly desirable, from an economic point of view, that transport should be cheap, but this cannot be when all iron and steel requisites for railways are purchased under a system of protection. When there is only a low tariff for revenue purposes what extra cost has to be paid for goods purchased within the country is largely, if

not entirely, recouped from the customs on the goods which accrues to government, but a really protective duty yields little compensation for heavier costs.

Similarly, all government requirements in mill-made cloth have to be purchased at higher rates within the protected market, so that the tax-payer is continually contributing to the financial success of factories from which he derives no benefit.

That in time there must come an end to such a one-sided policy is exemplified by the United States and Western Australia, but India is to suffer still more before relief can come. It is openly stated that the new Federal Government must look in the future more and more to customs duties for its revenue, so that a great addition to the burden borne by Indian commerce is inevitable. Indian exports are generally of a low quality, badly prepared, badly graded and mixed with impurities; their one merit in overseas markets is their relative cheapness; in quality they are unable to compete with commodities from better organised countries; the trade is thus lacking in strength and it is doubtful whether it will be able to stand the additional burdens placed upon it.

It has been stated above that sentiment rather than economic advantage has been the moving force in the demand for protection and specially in the ready acceptance of it by people representing provinces which can gain nothing; the usual arguments in favour of a protective policy are well known: protection reserves the home market for local industries and so provides employment for capital, labour and skill within the State; it is true that the price of goods is increased but as everyone gets higher wages they can afford to pay more and as their incomes increase so do their wants, and these in turn give rise to new industries to satisfy them, thus resulting in yet more employment for capital, labour and skill, and so on. The ardent protectionists paint an ideal scene of ever-widening activity for capital, labour and skill, of rising standards of living, rising wages, increasing wealth and increasing scope for profitable investments. The picture might have some semblance to the truth if everyone were involved in the rise of prosperity; but in the first place a policy of "discriminating protection" can never bring benefit to all, some few must gain, while the rest lose; secondly, in a huge country like India the benefits of protection are strictly limited to a narrow sphere, including the capital, the labour and the skill employed in the protected industries and their subsidiaries only, and this gain is obtained from the small contributions levied through prices from the rest of the people. By no possible line of reasoning can it be shown that agricultural provinces gain anything substantial from the protection of a few factories in distant places; the basic assumptions underlying the arguments favouring a protective

policy are absent. That the costs of living, of production and of communications are raised in the Punjab by protection is indisputed and indisputable; that there is any compensating gain, beyond the aesthetic spectacle of far-off industries is never claimed.

Considering the size and variety of climate and resources of Indian provinces whatever arguments may be brought forward in favour of protection of the whole apply with greater force to the parts, and inter-provincial protection may easily come to be a political cry from provinces at present suffering from a one-sided policy. The Punjab is so poor in resources favouring industrial expansion that it may well demand protection from more favoured provinces; if the Bombay mills can make out a case for a market reserved for their goods, a Punjab cloth mill could make out a better one for protection from Bombay, for it is doubtful whether the Punjab will ever see a flourishing cloth weaving industry in the face of Bombay competition. The argument might be extended to sugar from the United Provinces and other cases.

Without some such policy of inter-provincial protection, and Indian provinces are larger than most European States between which tariffs exist, it is inevitable that the costs of living in the Punjab will increase and the standard will decline. When an industry gains from protection, that gain has to be taken from somebody; it is not a gift from heaven, but a load on the consumer and where the consumer receives nothing in compensation he remains a loser.

It was that great Indian, the late Mr. Gokhale, who said that "it is my deliberate conviction that, in our present circumstances, a policy of free trade, reasonably applied, is after all the safest policy for us." Modern Indian writers have commented on the vagueness of the demand for industries, the lack of any clear vision as to which industries should be protected or which should be started, or where they should be tried; and experience indicates that protection alone will not lead to the starting of large-scale industries. Even where small industries exist there is practically no attempt to organise them; in many places in the Punjab there are to be found from twenty to fifty or a hundred hand-loom weavers, but the skill, capital and enterprise to convert these isolated individuals into an organised factory are not forthcoming. These same workers using improved machines and whatever other advantages greater capital could bring, guided by skilled experience and with a market provided by an expert salesman should be able to produce much more wealth than they do. Wherever there are a number of isolated workers in any craft there should be room for an organiser, a manager, a man of

capital and enterprise. And what is the usual reply? That there is no market for the goods when made. Which is exactly one reason why organised industries are shy of appearing; the wants of the people are too simple to provide a market; the demand will come only when increasing prosperity brings a desire for a greater variety of goods; it is the general poverty of the people which stands in the way of the expansion of industries created to supply their wants, and this poverty will not be increased but seriously diminished by the present policy of protection in favour of a few distant mills.

1. ~~It~~ Economic nationalism, Free trade

Protection for

1. Agriculture. U. S. And Belgium, Denmark, Germany and France.

Protection for industries. U. S. D. Austria & Prussia.

Limitations to Protection in case of Punjab.

- (i) Lack of natural resources.
- (ii) not much employment.
- (iii) Repay Means of repayment of loans.
- (iv) Russia & India and Japan effect of on cotton.
- (v) Transport costs. - heavy.
- (vi) Govt expenses - to buy clothes from Indian mills. Heavy taxation.
- (vii) Inter provincial protection.
- (viii) Land is cultivated by the tenant - Small lot

for Protection:- Divergence of occupation
 protection for national self sufficiency,
 key industries
 Public Revenue argument

CHAPTER XX

THE FUTURE OF THE PUNJAB

The new wealth and its investment—new towns—new assets—the disappearance of the benevolent Government of India—lack of land management—limitations of autonomy—the threat to commerce—sources of central revenue—Excise—Salt—Income Tax—Customs—can India afford it?—without sacrificing agriculture?—and railways?—and irrigation?—and risk of famine?—The price of democracy—Will Federation bring ruin to agriculture?—and threaten prosperity?

In the preceding chapters some account has been given of the main economic features of a great province. It remains now to attempt a summary and a forecast. It seems necessary to do this because the great forces that make for prosperity stand out clear to the ordinary observer, while others that threaten the Punjab with grave disaster are apt to be overlooked when only the most careful conduct of the leaders of the future will serve to protect it from crumbling under the factors that may rob it of its wealth.

The Punjab has great assets in its climate, its soil and its people; but these alone failed to bring either wealth or welfare until, on the initiative of the British Administration, there were constructed great works of communications and irrigation which stimulated production, increased trade, and brought into being a wealthy and influential commercial and professional class which previously had had no existence. It was the linking up of the Punjab with the markets of the world that completely altered the whole outlook of its people towards production and distribution. The peasantry guided by a beneficent and benevolent government brought under the plough vast areas in the new colonies, while much of the money newly acquired by the commercial class was invested in the creation of new towns and in the rebuilding of the older ones. How many crores have been sunk in buildings in the Punjab in the last thirty years it is not possible to say; there are many who would be astounded by the figure if it could be computed, for this immense productive investment attracts far less notice than its great importance deserves. The fact that the province is mainly agricultural is apt to distract attention from the new source of annual income from urban rents.

But the towns, whether new or old, have not absorbed all the savings of the new commercial and professional classes ; there has been in progress quite a remarkable development of factory industries, based on steam power or the oil engine, which would inspire more pride if it were less scattered. It might be useful if those who love to decry the progress of the province would read the official reports of thirty or forty years ago. If they would go a little further back they would agree that from about 1860 to 1920 there was a continuous and rapid material progress which marked the change from a poverty-stricken, almost desert and ever famine-threatened province to the most flourishing part of India. It is not only in material assets that the province has gained ; it has built up great departments of education, co-operation, agriculture, medicine, health and veterinary science. It has worked out an excellent and modern system of rural schooling, it has by careful study and research placed its agriculture on to a more profitable basis, it has created a huge system of rural finance on co-operative lines, it has perhaps the greatest bull-breeding and horse-breeding schemes in the world ; it leads India in more ways than other provinces are always willing to admit ; so far as rural welfare is concerned it is easily first. If only it were possible to allow the Punjab to continue its future development free from political interference it would be easy to write with confidence of the prospect before it. Unfortunately, what are known as "political considerations" have obtruded themselves ; by a curious coincidence both the peak of prosperity and the end of efficient benevolent government were reached about 1920-21, and since then the whole outlook has undergone a serious change for the worse.

The Government of India was led to abandon its great and fruitful policy of the benevolent landlord in the attempt to placate a few inexperienced legislators thrust into a position for which they had had little training. Up to the commencement of the Great War, the Government of India had conscientiously and determinedly set itself to do all in its power to lighten the burdens and increase the amenities of the great mass of the people and its record will go down into history as one of unexampled success. The immensity of its achievement can perhaps be best understood from a comparison of some of the earlier reports with present day conditions ; readers might find a perusal of the Report on the Famine in Orissa of 1866 as illuminating as any, but there are many others. Unfortunately, as it has turned out, the Government of India was too distracted by wars, pestilence and famines, too absorbed in its self-appointed task of introducing modern organisations into a great sub-continent and too overwhelmed by the rapid increase of work its tasks entailed to take

longer views on the political repercussions of its own great achievements. The opening of the Suez Canal, the introduction of the steam cargo boat and of railways, the great success of its experiments with irrigation works, and the quick response of India to the openings for trade and commerce took it by surprise; it was not prepared for what are now recognised as inevitable changes and it lagged behind the growing needs of the new era it had introduced. Decentralisation of powers to provinces was effected somewhat niggardly; the system of "divided heads" in finance was found to be out of date almost as soon as it was introduced, and the next step was barely under trial before it, too, was brushed aside by the impatience of a few. The Reforms of 1919 had hardly been started on their way before there came a demand for more, and this demand, persistently pressed, had the serious effect of distracting the attention of the new legislators from their responsibilities for internal development and from the need for a close study of the economic requirements of India. Over and over again the case for India has been befogged by the clamorous demands of a petty section, and crimes have been committed and injuries inflicted on the great mass of the people in the name of the "nation" when little consideration was needed to show that the real national interest lay along other paths.

Within the Punjab there are elements of weakness of which the reader must be reminded. Although the introduction and spread of railways, education and co-operation have brought about a better understanding and a greater mutual sympathy amongst the people, there have come into prominence less pleasant features which make for schisms. The neglect in general of the great landlords (with some well-known honourable exceptions) to rise to their responsibilities has placed them in a weak position in the presence of their urban critics; the persistent misrepresentations about the Punjab Alienation of Land Act have led to ill-feeling which has little foundation in fact but which no statement of simple truth seems able to dispel. (1) Put into the simplest form, the hereditary agricultural classes of the province looked to the land as the means of raising produce, as a source of livelihood, while there were others who were attracted by its possibilities as an investment when its price was rising far more rapidly than its owners realised; to them the produce was of less interest than the price and there were historical reasons described elsewhere in this book which enabled them to surprise the hereditary owners into sales which previously

(1) Even in 1935 there are actually men who like to be thought intelligent who write and speak of this Act as an anti-Hindu measure; they do not of course come from East of Lahore.

were almost unknown. To the Government of India the example of Ireland, with its history of dispossession of ancient owners and their degradation into tenants with all the subsequent troubles, was an outstanding example of the dangers of allowing an ancient system of landholding to be destroyed at the behest of a class which had little interest in the land as a source of livelihood, and, after the most widespread and meticulous examination of the circumstances throughout India, it decided upon a series of measures nearly all of which, except the single example of the Punjab Alienation of Land Act, have met with uncontentious favour. But the aim of the government was to preserve in their ancient heritage the tribes who from old had found in the soil their surest source of livelihood ; the long discussion that preceded 1901 contains no support for the idea that individuals were to be protected in any degree, and the larger landlords have exposed themselves to serious criticism by claiming that they should be preserved in their possessions in spite of their debts, their extravagance, their neglect of their land, and their lack of any proper sense of responsibility as the owners of so large a portion of the source of recurring wealth. No government could undertake to defend in their possessions men who neglected to devote those possessions to the uses best calculated to promote the happiness and prosperity of the great mass of the people. In an ever changing world, he who blindly refuses to adopt the best modern methods cannot look for either sympathy or support from a government based upon the popular vote. If the great landlords wish to be protected in their possessions, they must show their fellow Punjabis that they are worthy of their trust and worthy of their great responsibilities.

Turning now to the urban section of a virile population, it has to be admitted that their selection of the uses to which their new found wealth should be put has not left them immune from criticism. The ancient hereditary industries of the country have been neglected by those who, loudly calling for government assistance to manufactures, have scorned to recognise those around them, and have refused support to any attempt to develop them. This attitude has been fortified by caste prejudice which has doomed several promising enterprises to the neglect of the less advanced classes, who possess neither the education nor the capital nor the enterprise nor the originality to make the best of the opportunities before them. Lac is only one of several examples of neglect of opportunity which history must record against the higher castes. The simple fact must be faced that the great potentialities of both agriculture and industries have suffered neglect through the persistence of ideas and standards which block the road to economic development.

On the other hand, the persistent demand for the free purchase of land which could not by any possibility enhance the wealth of the province has disclosed a lack of appreciation of the factors that make for economic prosperity.

All that has been so far mentioned touches, however, but the fringe of the difficulties that beset the province. There are some who seem to believe that the advent of provincial autonomy will bring the power to mould the destiny of the province to their will and will enable them to make large decisions about its economic development. Such people believe in creation rather than growth; they neglect the history of the past with its slow changes spread over long periods; they find no lessons from the great distance in time which has witnessed the potter's stone wheel, the homely spinning machine, the local plough, the draught bullock, indigenous systems of medicine and numerous other features of the province; they think the magical wand of political power will enable them to change all these, that living things need not be grown but can be created afresh at their whim, and they fail to realise the immense change in the position of the Punjab in its relations with the Central Government which Federation will effect. Perhaps, the argument may be interrupted to attempt an explanation.

Hitherto, the Punjab has had over it a great and benevolent administration, absorbed in the almost single object of relieving the burdens and developing the resources of the people; if the Punjab has felt a difficulty or met with an obstacle, the Government of India has sought a remedy with the single desire to secure benefit to the province. If the difficulty or obstacle has arisen from another province or State, the Central Government has acted as friendly arbiter, using its good offices to bring about a settlement in the best interests of both parties. In all such cases it has been sufficient for the parties to state their position in order to ensure a thoroughly complete and impartial consideration by the Government of India. There has never been any question of canvassing disinterested provinces or States, or of striving to win not by the rightness of the cause but by haggling for votes. How the new Federation is to work has been amply exemplified by the history of "reformed" India since 1920. The Government of India has been forced to abandon its rôle as the fountain of justice, sympathy and fair dealing and to follow the dictates of the party best organised, most vocal, possessed of the press most adapted to its needs, and, if rumour be true, sometimes most unscrupulous and corrupt. The first instance of what the future was to bring was provided by the agitation for the protection of steel; a further one came from the agitation to secure protection for cotton cloth.

The above are two instances only of the sacrifice of the interests of the great mass of the people at the behest of a tiny minority which knew what it wanted and was prepared to do what was required to achieve its object. It is unpleasant to record the results of careful study but it seems necessary to make clear that the province in gaining autonomy is losing the best friend it ever had, a benevolent, sympathetic, just and conscientious Government of India.

To turn now to the previous discussion it will be remembered that attempt was being made to explain the dangers that beset the province under the changed regime and the limitations upon its future leaders even under what is described as democratic self-government. The main source of new wealth is still the land and the new Government will find here little scope for further development on the lines so familiar for the last forty years, for the great wastes have been exploited until there is little suitable land left. The division of the land amongst the people is hardly a subject for political interference. The great activities of distribution will remain in other hands: the railways, the posts and telegraphs, communications overseas and port facilities and costs will all remain outside provincial autonomy. The great functions of marketing will thus rest in other hands; even the essential factors of finding purchasers and stimulating demand are likely to be left to those who are not Punjabis. Prices will continue to be largely determined by extraneous influences, including of course the effects of the policies of the central government in regard to import and export duties, currency and exchange. Elsewhere in this book it has been pointed out how dependent is the Punjab for its canal water upon the continued careful conservancy of the forests in the catchment areas of its rivers beyond its boundaries, and in probably no other direction will the old benevolent, sympathetic and well-intentioned central government be more missed. The peculiar geographical position of the Punjab deprives it of control over its own trade; its magnificent manhood will be helpless in the future before the unscrupulous and self-seeking politicians of Bombay whose greater political acuteness has already been clearly demonstrated at the cost of India as a whole. Its representatives will have to realise that the old era of benevolence is over; that the new Federation will have no interest in protecting the Punjab unless they can organise a political party to fight its enemies. Its greatest danger lies in the stranglehold which Bombay interests have secured over its trade by "inducing" the central government to adopt a policy of protection. A people so far removed from sea and sea-ports as are those of the Punjab find difficulty in understanding problems of import duties, just as the peoples

of Bombay and Madras find difficulty in understanding the problems of a land frontier. The term "protection" means little to a Punjabi who carries on trade free of all duties on all his frontiers; it is difficult for him to understand that everywhere throughout the wide world protection almost of necessity involves political dishonesty and corruption, either as direct payment to legislators as in some countries or as contributions to party funds in others. It may be necessary, indeed, perhaps it will be necessary for the Punjab to partake in this game and to organise funds for the bribery of support in its own protection. For the facts seem to be quite simple: the province will now enter the Federation as a minority; if it is to save anything of its old prosperity it must organise a majority and this majority must, if appearances be trustful, be the combination of agricultural interests against the protectionists, and as the whole world witnesses to the essential corruption that supports protection the Punjab will have to gain its majority by fair means or foul or sink back into a mere hewer of wood and drawer of water for the protectionist interests of Bombay.

The earlier chapters of this book will have been written in vain if the reader is not convinced that the gradual escape from the ever-present threat of famine was only secured by the adoption of all measures calculated to stimulate production and trade; before the introduction of these measures the province had no overseas trade at all; from 1900 onwards until 1920 it gained vast sums from the sale of its produce. So long as there were no artificial obstacles placed upon commerce, the prospects for the province remained bright; but recently changes have been made which seriously endanger the overseas trade. To illustrate this in the table below are given the main heads of revenue of the central government from pre-war years to the present day and they will repay careful examination.

Year.	Customs.	Income tax.	Salt.	Excise.
	[Lakhs	of	Rup	ees.]
1911-12	9,70	2,48	5,08	11,41
1912-13	10,79	2,61	5,00	12,41
1913-14	11,34	2,92	5,17	13,24
1914-15	9,52	3,05	5,87	13,29
1915-16	8,81	3,13	5,47	12,95
1916-17	12,99	5,66	7,23	13,82
1917-18	16,55	9,46	8,24	15,24
1918-19	18,18	11,64	6,41	17,34
1919-20	22,48	23,20	5,74	19,26
1920-21	31,90	22,19	6,76	20,44
1921-22	34,40	22,17	6,34	17,18
1922-23	41,34	18,14	6,82	13,55
1923-24	39,69	18,49	10,01	19,40
1924-25	45,75	16,21	7,39	19,52
1925-26	47,78	16,12	6,32	19,90
1926-27	47,38	15,98	6,70	19,83
1927-28	43,21	15,42	6,03	19,82
1928-29	49,28	17,05	7,59	19,96
1929-30	51,27	17,06	6,76	20,41
1930-31	46,81	16,31	6,83	16,77
1931-32	46,44	17,49	8,57	..
1932-33	51,95	17,97	10,07	..
1933-34	51,24	18,66	8,75	..
1934-35	48,49	17,25	8,73	..

The figures for 1933-34 and 1934-35 are estimates.

The main points that emerge from a consideration of these figures are, that until the Great War the Government of India had four important sources of revenue amongst which customs was an important but not the chief one. The duties imposed were for revenue only and were so low as not seriously to affect internal prices or the flow of trade generally. As the war progressed India was called upon to make greater exertions while her expenditure was increased by the unusual conditions prevailing, and in 1916-17 there were introduced large enhancements of taxation; efforts to raise more revenue continued until the boom year of 1920-21 when prices reached their maximum. Until this time India had undoubtedly made enormous gains from the war and the sharp drop in prices and prosperity which the end of the post-war disturbances brought about affected her trade considerably. At about the same time there were introduced the Reforms of 1919, which came into effect in 1920; it was considered out of the question for the new Ministers and Members to perform their duties with the old resources if they were to gain and retain popular favour and accordingly the Government of India set about to find further revenue out of which to remit the contributions hitherto paid by provinces to the centre. The effects of these changes are sharply reflected in the figures. The policy in regard to excise had always been to secure the maximum of revenue with the minimum of consumption so that without encouraging more consumption there could be little more revenue; and Excise has proved very inelastic, refusing to yield more than in 1920-21.

Salt has unfortunately become a subject of more sentiment than its importance deserves, largely owing to ignorance and misunderstanding about salt monopolies in other countries. An increase of duty here brought about a sharp drop in consumption and it was clearly impossible to look to this source for the large enhancement of revenue which the new Reforms were thought to require. Admittedly it is important to avoid any action which would reduce actual consumption (other than waste) and accordingly it has proved almost as inelastic as Excise.

Income Tax promised great results at a time when prices were at their peak and when the richer people were not too unwilling to pay the enhanced assessment, but ensuing years have clearly demonstrated that its yield drops if too great pressure be applied. It will be noticed that the same period, about 1920-21, marked the highest point in yield, and all later measures have not resulted in more income for the central treasury.

There has remained the one source which in the interests of a poor population the Government of India had previously treated

with the greatest care, the taxation of imports which in the end must mean the taxing of the poor. Upto the war, customs duties had been imposed for revenue only, but the urgent need for larger expenditure led to the imposition of duties which exceeded the limits of a normal revenue rate but were yet not so high as to burden the poor. With the advent of the Reforms and the abandonment by the Government of India of its position as benevolent landlord and guardian of the people, pressure was brought to bear in favour of higher and ever higher duties with the deliberate intention of making them at least partially protective and in the cases of steel and cotton purely protective. The urge came almost entirely from the urban representatives whose influence in the Assembly far exceeded their numbers, as the rural interests have seldom been sufficiently organised to defend their own cause. The result is clear from the table above. Customs, formerly one only of the main sources of central revenues has become the single elastic source until it now provides the largest item in the income of the Government of India.

To understand the real importance of these figures it must be remembered that the number of those who pay income tax is very small indeed, and that the vast majority are below the income tax level or derive their incomes from agriculture and so are exempt. In the chapter on holdings the smallness of the number owning large areas has been made clear so that the position must be accepted that as the income tax payers are too small in number to carry the burden of customs this must fall on the great mass of the poor. Receipts from such items as oil, sugar, cotton goods, arecanuts (1), steel, matches and miscellaneous manufactured articles are derived mainly from the poor masses rather than from the richer classes in the towns.

The main reason for the increased duties has been the need for revenue to enable the Reforms to be popular with the more vocal people; there is no disputing the fact that India has many needs which should be provided if funds become available, but there is such a thing as cutting one's coat to suit one's cloth, and it is a grave question whether the people are able to bear the increased burdens thrown upon them in the name of popular government. The Government of India has repeatedly informed parliament that the country can afford only the simplest form of administration and has over and over again pleaded the poverty of the masses as its honest and sufficient reason for not providing amenities which well intentioned persons so persistently press for. The table shows that the three great heads of Excise, Salt and Income Tax, which in 1920-21 yielded over 49 crores of rupees,

(1) Miscalled betelnuts in the returns. The betel is a vine.

in 1930-31 brought in nearly ten crores less; there is obviously a sharp limit to the taxation which India can bear, and those who in the name of "the people" would object to an extra crore from salt while willingly adding 30 crores from customs will have seriously to consider whether the country will be able to afford the enormous cost of a democratic system of government. It is not here a question whether Indian politicians ought to have greater powers, or whether they rightly look forward to exercising those powers or whether India has a moral right to this or that form of government. This is not a political but an economic treatise and the simple question is whether India can pay the cost of achieving the ambition of her political leaders. It is a striking fact that in all the welter of mendacity poured forth in England in support of the recent India Bill, not a single speaker seems to have claimed that India could afford the system of government they advocated. When it is considered that most of the supporters of that measure could with safety have been challenged to prove that their remarks were one-thousandth part true, and in some cases even one-three-thousandth part, not one dared to make himself responsible for the statement that the extravagances of democratic government were within India's capacity to pay. India is exchanging the cheapest and most efficient form of government for what is generally admitted to be the most extravagant and much less efficient, and the only source of any considerable additional revenue would appear to be the further taxation of trade. Already in some instances the customs duty is defeating its object as a producer of revenue; the rates are too high for the trade to bear; yet the experience of India's legislators has not been sufficient to disabuse them of the strange idea that international trade is bad for all parties and that India can aim at self-sufficiency without achieving economic suicide.

In a previous chapter it has been explained that the goods, services and loans supplied by any country equal in the long run roughly the goods, services and loans she receives. What is less widely understood is that in the cycle of trade a stricture affects the flow wherever applied; if by heavy import duties India restricts the free flow of goods into her ports, she must contract the services or loans she receives or the goods she sells. But India is in a position where she cannot dispense with either services or loans and therefore any effect of import duties must fall mainly on her export trade. India is not able to render services of any considerable value to other countries nor can she make large loans; whatever she receives has to be paid for in goods exported.

The next point is of great importance; in spite of strenuous efforts to encourage industries by heavy protective duties, there is little likelihood that India will ever be able to export manufactured

goods in any quantity; at present the manufactured articles that leave the country are confined to jute and a little cotton, the main trade in exports is based upon the produce of her fields. Apart from some metals and ores and paraffin wax the export trade is almost entirely of agricultural origin, and even if such commodities as leather, wool and manufactured goods are omitted, there remains over 76 per cent. which is made up of field produce; therefore any loss of overseas trade resulting from heavy duties imposed to satisfy industrialists must fall upon the exports of agricultural produce and so must diminish the trade in such produce. (1) When it is remembered that it was the growth and development of this trade which converted India from a famine-stricken land to one of steadily increasing prosperity, the dangers involved in this policy will be realised. The first to suffer will be those tracts which produce in excess of their local consumption and which have a considerable surplus for export, such as the Punjab canal colonies.

One effect of this urban-inspired policy will be to keep prices of agricultural produce to a low level; this is the aim of industrialists and town labour in most countries for the manufacturer naturally enough wants cheap raw materials, cotton, oil-seeds, wool, etc., and also cheap food for his labour. But in India there are aspects of this policy which are apt to be overlooked but which touch the agriculturist closely. The great railway system has cost nearly 900 crores of rupees, most of which has been borrowed from England and on which interest has to be paid whether the lines return a profit or not. The system was largely designed to convey agricultural produce to the ports and to distribute the goods imported in exchange throughout India. In earlier pages of this book it has been explained that earnings do not by any means always cover expenses and for long periods the system works at a loss although the benefits to the country at large are incalculable. Since the great depression there have been heavy losses on State railways, and, judging from the small net earnings (after deducting interest charges) over a long period, it would seem that there is ground for the belief that the system must have a large carrying trade to and from the ports if it is not to be a burden on the tax-payer. The system was designed originally when India was a free-trade country, and it expanded on the assumption that a large overseas trade would continue; it is doubtful in the extreme if the system will ever pay if the

(1) The percentages of exports in 1933-34 were as follows:—Raw cotton 23·15, cotton manufactures 1·75, jute raw and manufactured 22·1, tea 13·32, grain, pulse and flour 7·83, oilseeds, etc., 6·97, metal ores 3·91, leather hides and skins, 5·70, lac 2·18, wool raw and manufactured 1·45, oilcakes 1·30, paraffin wax 1·27.

overseas trade continues to decline owing to heavy duties. In the two years 1930-31 and 1931-32, there was a net loss of over 14 crores and the risk of such heavy losses recurring will have to be faced if the "self-sufficing" policy continues. Unfortunately for the agricultural classes much of the loss would be passed on to them by heavier freight charges on their produce still further reducing the price gained for it and by heavier taxation designed to make up the loss.

But there is yet another great undertaking involving heavy expenditure from loans and that is the Irrigation system; as has been already stated these great works like the railways were undertaken to relieve the cultivator from the ever present threat of famine and well have they served their purpose; but they too were designed when India was a free trade country and they were financed when there was no suggestion of the heavy restrictions on trade which are now becoming a normal feature. With prices of agricultural produce at a fair figure the cultivator finds little difficulty in paying the water rates and indeed is prepared to pay much more; but with prices of produce forced down to a low level it is becoming increasingly difficult for him to meet these charges and if the low level is artificially maintained by high tariffs there is every danger that the great irrigation system of which the Punjab is so justly proud will become a serious liability on provincial finances.

From what has been written above it should be clear that the resort to heavy tariffs threatens dangers to the country at large and the Punjab in particular and that the rural interests demand greater freedom for overseas trade both in order to encourage production and to secure in a normal year such an excess of food-grains over home consumption as will serve to protect the country against the threat of famine. At the moment the position is one to cause anxiety; India is not in a condition to face a serious failure of her harvests such as brought so much distress in the closing years of last century. There are so many extraneous factors affecting exports from India that figures must be viewed with caution but the simple fact seems to be that while in the five years 1922-23 to 1926-27, India exported on the average 534,000 tons of wheat and wheat flour, in the next quinquennium 1927-28 to 1931-32 the quantity exported fell to an average of 179,800 tons. The most severe famine on record in Indian history, that is to say the famine which affected the largest area and the largest number of people of which record exists occurred about 1897 when over a huge tract production fell to 40 per cent. and less of the normal. In the two five-yearly periods mentioned, the area under wheat slightly increased, but the estimated total yield fell from an average of 9,234 thousand tons to an average of

9,036 thousand tons ; but what is more important the proportion of the total estimated yield exported fell from nearly six per cent. to less than two. The export trade in wheat is vanishing; the protective buffer against the vagaries of the season afforded by an annual production considerably in excess of normal internal consumption has disappeared. A repetition of the failure of the wheat harvest on the scale of 1897-98 would place the whole of north-western India in a position to cause grave anxiety.

But even assuming that the country is now safe from such a repetition and that an acute shortage of food-grains is no longer likely to recur, there still remain the questions whether the Punjab can afford the enormous extra cost of popular democratic government and whether the central government will not be driven to heavier and more widespread import duties in order to find funds for additional expenditure. Between the introduction of the Reforms in 1920 and the present day, expenditure, both provincial and central, has increased by about twenty per cent. in spite of the watchful care of all finance departments. Hitherto, so far as the writer has been able to discover, no one has had the temerity to come forward and state that India can pay for the additional cost of a government dependent upon the popular vote. The nearest approach was by a late distinguished Finance Member who told his audience that he thought India could afford the *initial* expenses of *introducing* the Reforms without serious dislocation for her finances. He carefully avoided touching on the apparently inevitable consequences of democratising the administration.

In order to bring home to Punjab readers the seriousness of the question in practical form, the following table has been abstracted from figures in the Statistical Abstract of British India for 1931-32.(1)

Province.	Expenditure charged to revenue per head.	Excise income per head.	Land revenue per head.	Col. 2 less Cols. 3 & 4.
Madras ..	2.7	.9	1.14	.66
Bombay Presidency ..	6.1	1.5	2.27	2.33
Bengal ..	1.9	.3	.6	1.0
United Provinces ..	2.2	.22	1.4	.58
Punjab ..	3.7	.4	1.3	2.0
Bihar and Orissa ..	1.2	.3	.45	.45
Central Provinces ..	3.1	.4	1.5	1.2

(1) The table has been derived from a simple arithmetical treatment of figures for provinces as given in the Abstract. In the Punjab Irrigation receipts are obviously net.

Readers familiar with the Punjab will have a fair idea of the type of administrative amenities provided and they will see that they are already enjoying more expensive State provision than any other province except Bombay. They will also be able to see that although their land revenue is low and their excise income small they enjoy these amenities owing to the large income from rents in canal colonies and from irrigation receipts. The provinces cursed with the Permanent Settlement are in a hopeless position and Punjabis have reason to be thankful that the efforts of her politicians to introduce this "curse" were defeated. But the point for consideration is this: Are the people of the Punjab prepared to pay for an administration on the scale of Bombay (even before further Reforms lead to further enormous expenditure) and are they prepared to go even further and find the taxes to pay for democratic government? This is not a political treatise and nothing here written must be misconstrued into an attack on the new constitution except on this single problem of whether the country can afford it and is willing to pay for it. In the Punjab it will be seen that as excise brings in comparatively little from a proudly abstemious people, and as land revenue settled for forty years cannot be manipulated to provide any sudden increase, the most promising sources of the new revenues demanded by a democratic constitution are irrigation rates and rents in the canal colonies. That is to say that the very class which has hitherto resisted the increase of colony rents and water rates and which by its greater wealth has been able to secure a majority of seats in the provincial Legislature will now be faced with the option of providing the additional funds required to finance popular government or of making that government impossible.

It has been shown that under a federal system there is an overpowering tendency to rely upon higher and ever higher customs duties to meet federal expenses until either rebellion or ruin or secession comes to the relief of the agricultural members; Burma has already won her escape from the threatened future and the suggestion arises whether it would not be wiser at the outset to forestall the almost inevitable ruin of agriculture and the agriculturists by allowing the provinces dependent on this source of livelihood to form a federation separate from that of the industrially-minded. The Punjab, Frontier province, Baluchistan, Sind and the Indian States served by the North Western Railway with the free port of Karachi, if permitted to federate separately from the rest of India, might escape the evil consequences of a central government relying, under the corrupt influence of protectionists, on the stifling of international trade for its resources. The rural peoples cannot for ever remain in ignorance of the heavy burdens already imposed upon them or of the causes

of the continued low prices of their produce and of the removal of markets from their reach ; and when realisation comes it will be difficult to see how India will be able to escape from demands for secession or for the isolation of Bombay.

The writer of this book agrees with the Government of India in its oft-repeated warning that India cannot afford to pay for the type of administration about to be introduced ; he believes that the urban demand for high tariffs is seriously endangering the prosperity of rural India and is placing upon the poor masses burdens greater than they can bear. He believes that India's long immunity from famines has been largely brought about by the nobly-inspired efforts of a different Government of India to remove all obstacles to trade, to bring overseas markets within the reach of the cultivator and to relieve the people of every kind of burden that was hampering their endeavours to secure for themselves and their dependants a better life. In the reversal of this policy he sees nothing but danger to the welfare of the people. There will be many who will deride this note of warning ; to such he would suggest that they spend in the Library of the India Office as many hours as he has done studying the records of previous famines and then ask themselves whether they are willing to pursue a policy which might involve India in another such horrifying experience, or in another long succession of them. If the new Government of India can devise means permitting a return to pre-war tariffs for revenue, then the Punjab may be able to confine her administrative activities to what she can afford and to devote the energies of her people to the advancement of their wealth and their welfare along the lines suggested in this book.

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(Note:—The index is mainly confined to references specially relevant to the argument.)

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